

=> FILE REG

FILE 'REGISTRY' ENTERED AT 16:10:07 ON 05 JUN 2003
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STRUCTURE FILE UPDATES: 4 JUN 2003 HIGHEST RN 525536-93-0
DICTIONARY FILE UPDATES: 4 JUN 2003 HIGHEST RN 525536-93-0

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when
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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STN Note 27, Searching Properties
in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> FILE HCAPLUS

FILE 'HCAPLUS' ENTERED AT 16:10:12 ON 05 JUN 2003
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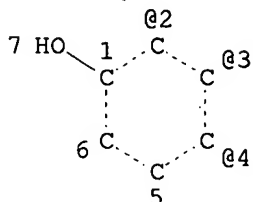
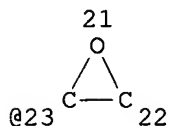
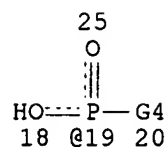
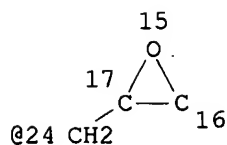
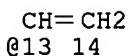
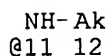
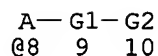
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FILE COVERS 1907 - 5 Jun 2003 VOL 138 ISS 23
FILE LAST UPDATED: 4 Jun 2003 (20030604/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> D QUE L44

L3 STR



G3 @26

REP G1=(0-20) A
 VAR G2=OH/SH/11/SO3H/COOH/13/24/23/19
 VAR G3=OH/SH/11/SO3H/COOH/13/24/23/19/8
 VAR G4=AK/CB
 VPA 26-2/3/4 U
 NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RSPEC I
 NUMBER OF NODES IS 26

STEREO ATTRIBUTES: NONE

L16	826	SEA FILE=HCAPLUS ABB=ON	STERI?(3A)HINDER?(3A)?PHENOL?
L18	3121	SEA FILE=HCAPLUS ABB=ON	COMPATIBI?(L)FUNC?
L19	1423	SEA FILE=HCAPLUS ABB=ON	L18 AND (POLYMER? OR PLASTIC?)/SC,SX
L20	4795	SEA FILE=HCAPLUS ABB=ON	HINDER?(4A)?PHENOL?
L21	2804	SEA FILE=HCAPLUS ABB=ON	L20 AND (POLYMER? OR PLASTIC?)/SC,SX
L22	4701	SEA FILE=HCAPLUS ABB=ON	L16 OR L19 OR L21
L23		SEL L22 1-4701 RN :	16167 TERMS
L25	16079	SEA FILE=REGISTRY ABB=ON	L23
L27	494	SEA FILE=REGISTRY SUB=L25	SSS FUL L3
L28	112376	SEA FILE=HCAPLUS ABB=ON	L27
L29	627	SEA FILE=HCAPLUS ABB=ON	L28 AND (L16 OR L18 OR L20)
L30	357	SEA FILE=HCAPLUS ABB=ON	L29 AND (POLYMER? OR PLASTIC?)/SC,SX
L31	9150	SEA FILE=HCAPLUS ABB=ON	L27/D
L32	26	SEA FILE=HCAPLUS ABB=ON	L31(L)COMPATIBILI?
L34	40	SEA FILE=HCAPLUS ABB=ON	L30 AND L31
L35	8134	SEA FILE=HCAPLUS ABB=ON	L28(L)(IMF OR PREP OR SPN)/RL
L36	717	SEA FILE=HCAPLUS ABB=ON	L27(L)FUNC?
L37	204	SEA FILE=HCAPLUS ABB=ON	L27(L)COMPATIBI?
L38	84	SEA FILE=HCAPLUS ABB=ON	L35 AND (L36 OR L37)
L39	10	SEA FILE=HCAPLUS ABB=ON	L30 AND L38
L41	2	SEA FILE=HCAPLUS ABB=ON	L38 AND (L16 OR L20)
L42	67	SEA FILE=HCAPLUS ABB=ON	L32 OR L34 OR L39 OR L41
L43	67	SEA FILE=HCAPLUS ABB=ON	L42 AND (L31 OR L35)
L44	57	SEA FILE=HCAPLUS ABB=ON	L43 AND (POLYMER? OR PLASTIC?)/SC

=> D L44 ALL 1-57 HITSTR

L44 ANSWER 1 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 2003:349549 HCAPLUS

DN 138:354937

TI UV-absorbing polymers with good compatibility to polyolefins, polyolefin compositions containing them, and their films and sheets with no bleed out

IN Yamamoto, Minoru; Mori, Hiroshi

PA Otsuka Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09K003-00

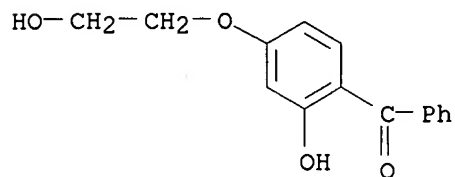
ICS C08F220-10; C08J005-18; C08L023-00; C08F220-36; C08L033-14

CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003129033	A2	20030508	JP 2001-324396	20011023
PRAI	JP 2001-324396		20011023		
AB	The polymers with mol. wt. distribution (Mw/Mn) 1.0-2.5 comprise H2C:CRCO2R1 (R = H, Me; R1 = C4-20-alkyl) 40-60, H2C:CRCO2Me (R = same as above) 10-30, and UV-absorbing monomers having ethylenically unsatd. double bonds 10-50%. Thus, Bu methacrylate-Me methacrylate-2-(2'-hydroxy-5'-methacryloxyethylphenyl)-2H-benzotriazole (RUVA 93) copolymer was kneaded with ethylene polymer (Neo-zex 3510F), extruded, and hot-pressed to give a sheet showing haze 5.1%, UV transmittance 0% before and after heptane extn., and good weather resistance.				
ST	film acrylic UV absorber compatibility polyolefin; benzotriazole methacrylate polymer sheet weather resistance; transparency polyolefin film acrylic UV absorber				
IT	Transparent films (UV-absorbing acrylic polymers with good compatibility to polyolefins for weather-resistant films)				
IT	Polymer blends Polyolefins RL: TEM (Technical or engineered material use); USES (Uses) (UV-absorbing acrylic polymers with good compatibility to polyolefins for weather-resistant films)				
IT	UV stabilizers (acrylic polymers; UV-absorbing acrylic polymers with good compatibility to polyolefins for weather-resistant films)				
IT	80-62-6DP, Methyl methacrylate, polymers with hydroxy[(meth)acryloyloxyethoxy]benzophenone and Bu methacrylate 97-88-1DP, Butyl methacrylate, polymers with hydroxy[(meth)acryloyloxyethoxy]benzophenone, and Me methacrylate 16909-78-7DP, 2-Hydroxy-4-(2-hydroxyethoxy)benzophenone, (meth)acrylate derivs., polymers with methacrylates 360056-56-0P, Butyl methacrylate-methyl methacrylate-RUVA 93 copolymer 519140-30-8P, Methyl methacrylate-pentyl methacrylate-RUVA 93 copolymer 519140-31-9P 519140-32-0P RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (UV-absorbing acrylic polymers with good compatibility to polyolefins for weather-resistant films)				
IT	25087-34-7, Neo-zex 3510F RL: TEM (Technical or engineered material use); USES (Uses) (UV-absorbing acrylic polymers with good compatibility to polyolefins				

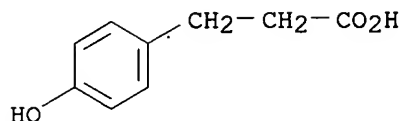
for weather-resistant films)
 IT **16909-78-7DP**, 2-Hydroxy-4-(2-hydroxyethoxy)benzophenone,
 (meth)acrylate derivs., polymers with methacrylates
 RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered
 material use); **PREP (Preparation)**; USES (Uses)
 (UV-absorbing acrylic polymers with good **compatibility** to
 polyolefins for weather-resistant films)
 RN 16909-78-7 HCAPLUS
 CN Methanone, [2-hydroxy-4-(2-hydroxyethoxy)phenyl]phenyl- (9CI) (CA INDEX
 NAME)



L44 ANSWER 2 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 2003:259721 HCAPLUS
 DN 138:272559
 TI Hydrolysis-resistant, transparent, amorphous films of crystallizable
 thermoplastics and process for their production
 IN Murschall; Ursula; Kern, Ulrich; Crass, Guenther
 PA Mitsubishi Polyester Film G.m.b.H., Germany
 SO Eur. Pat. Appl., 17 pp.
 CODEN: EPXXDW
 DT Patent
 LA German
 IC ICM B32B027-18
 ICS C08J005-18; C08K005-00
 CC 38-2 (**Plastics** Fabrication and Uses)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1297948	A2	20030402	EP 2002-21361	20020924
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	DE 10148306	A1	20030424	DE 2001-10148306	20010929
	US 2003091843	A1	20030515	US 2002-256904	20020927
PRAI	DE 2001-10148306	A	20010929		
AB	The title films, with good mech. and optical properties and resistance to embrittlement, comprise .gtoreq.1 layer and contain hydrolysis inhibitors (phenols , preferably sterically hindered). A mixt. of PET 51, masterbatch [80% PET and 20% hydrolysis inhibitor [arom. polycarbodiimide (Stabaxol P)]] 10, regenerated plastic 35, and antiblocking agent (PET and 1 phr Sylobloc 44 H) 4% was dried in vacuo and extruded to a 150-.mu.m film with transparency 93%, yellowness index 1.8, surface tension 40 mN/m, and good resistance to heat and weathering.				
ST	film thermoplastic transparent hydrolysis inhibitor; PET film transparent hydrolysis inhibitor; recycled plastic blend film transparent; carbodiimide arom polymeric hydrolysis inhibitor; phenol hindered hydrolysis inhibitor				
IT	Bisphenols RL: MOA (Modifier or additive use); USES (Uses)				

- (alkylidene-; hydrolysis inhibitors for transparent, amorphous films of crystallizable thermoplastics)
- IT Phenols, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (amino, N-acyl-; hydrolysis inhibitors for transparent, amorphous films of crystallizable thermoplastics)
- IT Plastic films
 (hydrolysis-resistant, transparent, amorphous films of crystallizable thermoplastics and process for their prodn.)
- IT Polyesters, uses
 Polyoxyalkylenes, uses
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (hydrolysis-resistant, transparent, amorphous films of crystallizable thermoplastics and process for their prodn.)
- IT Hydrolysis catalysts
 (neg., **hindered phenols** and arom carbodiimides;
 hydrolysis inhibitors for transparent, amorphous films of crystallizable thermoplastics)
- IT Amines, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (phenolic, N-acyl-; hydrolysis inhibitors for transparent, amorphous films of crystallizable thermoplastics)
- IT Plastics, uses
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (regenerated; hydrolysis-resistant, transparent, amorphous films of crystallizable thermoplastics and process for their prodn.)
- IT **Phenols**, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (**sterically-hindered**; hydrolysis inhibitors for transparent, amorphous films of crystallizable thermoplastics)
- IT 89421-57-8, Irganox B 561 159654-97-4, Stabaxol P
 RL: MOA (Modifier or additive use); USES (Uses)
 (hydrolysis inhibitor; hydrolysis inhibitors for transparent, amorphous films of crystallizable thermoplastics)
- IT **501-97-3D**, 4-Hydroxybenzenepropanoic acid, derivs. 26264-03-9D, Thiodiphenol, derivs.
 RL: MOA (Modifier or additive use); USES (Uses)
 (hydrolysis inhibitors for transparent, amorphous films of crystallizable thermoplastics)
- IT 151-51-9D, Carbodiimide, arom. derivs, polymeric
 RL: MOA (Modifier or additive use); USES (Uses)
 (hydrolysis inhibitors; hydrolysis inhibitors for transparent, amorphous films of crystallizable thermoplastics)
- IT 25038-59-9, uses
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (hydrolysis-resistant, transparent, amorphous films of crystallizable thermoplastics and process for their prodn.)
- IT **501-97-3D**, 4-Hydroxybenzenepropanoic acid, derivs.
 RL: MOA (Modifier or additive use); USES (Uses)
 (hydrolysis inhibitors for transparent, amorphous films of crystallizable thermoplastics)
- RN 501-97-3 HCAPLUS
- CN Benzenepropanoic acid, 4-hydroxy- (9CI) (CA INDEX NAME)



L44 ANSWER 3 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 2003:22951 HCAPLUS
 DN 138:90703
 TI Additive-functionalized organophilic nano-scaled fillers
 IN Camenzind, Hugo; Herbst, Heinz; Wunderlich, Wiebke
 PA Ciba Specialty Chemicals Holding Inc., Switz.
 SO PCT Int. Appl., 70 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C08K013-02
 ICS C08K013-02; C08K005-00; C08K003-00
 CC 37-6 (Plastics Manufacture and Processing)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003002652	A1	20030109	WO 2002-EP6848	20020620
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI	EP 2001-810634	A	20010629		
OS	MARPAT 138:90703				
AB	The present invention discloses a product obtainable by reacting a nano-scaled filler with a compd. of the formula (I): AD-L-RG, wherein AD is an additive selected from the group of radical scavengers, hydroperoxide decomposers, UV-absorbers, light stabilizers, flame retardants or photoinitiators, L is a spacer, RG is a reactive group, and the nano-scaled filler can be of unmodified or organophilically modified character (e.g., organically modified montmorillonite). These products are for example useful as stabilizers and/or compatibilizers in org. materials, or as photoinitiators in pre-polymeric or pre-crosslinking formulations.				
ST	stabilizer modified organophilic filler; fire retardant modified organophilic filler				
IT	Antioxidants Fireproofing agents Heat stabilizers Light stabilizers Polymer blend compatibilizers (additive- functionalized organophilic nano-scaled fillers)				
IT	Polyamides, properties Polyolefins RL: POF (Polymer in formulation); PRP (Properties); USES (Uses) (additive-functionalized organophilic nano-scaled fillers)				

IT Fillers
 (nano-scaled; additive-functionalized organophilic nano-scaled fillers)

IT Bentonite, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (organophilically modified; additive-functionalized organophilic nano-scaled fillers)

IT Silicates, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (phyllo-, organophilically modified; additive-functionalized organophilic nano-scaled fillers)

IT 13822-56-5P, 3-Aminopropyl-trimethoxysilane **104810-48-2P**,
 Tinuvin 1130
 RL: **IMF (Industrial manufacture); PREP (Preparation)**
 (additive-functionalized organophilic nano-scaled fillers)

IT 482647-57-4DP, reaction products with organically modified montmorillonite
 482647-58-5DP, reaction products with organically modified montmorillonite
 482647-59-6DP, reaction products with organically modified montmorillonite
 482647-60-9P 482647-61-0P 482647-62-1P 482647-63-2P 483297-86-5DP,
 Nanomer 1.42E, reaction products with stabilizer-modified silanes
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP
 (Preparation); USES (Uses)
 (additive-functionalized organophilic nano-scaled fillers)

IT 20354-56-7P 34751-42-3P 148913-74-0P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)
 (additive-functionalized organophilic nano-scaled fillers)

IT 32131-17-2, Zytel 101L, properties
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (additive-functionalized organophilic nano-scaled fillers)

IT 74-88-4, Methyl iodide, reactions 96-48-0, .gamma.-Butyrolactone
 105-60-2, 6-Caprolactam, reactions 124-09-4, 1,6-Diaminohexane,
 reactions 546-68-9, Tetraisopropyl titanate 6386-38-5, Metilox
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (additive-functionalized organophilic nano-scaled fillers)

IT 1318-00-9, Vermiculite 1318-93-0, Montmorillonite, uses 1319-41-1,
 Saponite 12172-85-9, Beidellite 12173-47-6, Hectorite 12174-06-0,
 Nontronite 12285-88-0, Magadiite 12285-95-9, Kenyaite 12417-86-6,
 Stevensite
 RL: MOA (Modifier or additive use); USES (Uses)
 (organophilically modified; additive-functionalized organophilic nano-scaled fillers)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

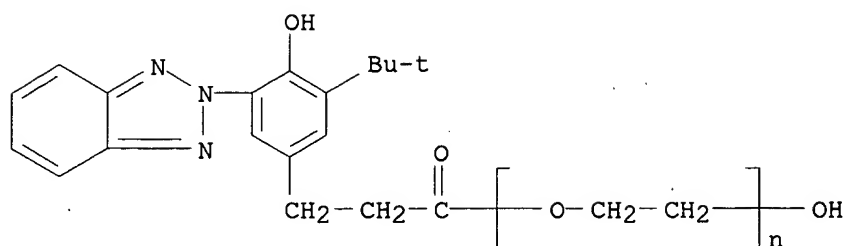
RE

(1) Ecc Int Ltd; GB 2247681 A 1992 HCAPLUS
 (2) Inst Neue Mat Gemein Gmbh; EP 0810259 A 1997 HCAPLUS
 (3) Nippon Oil Co Ltd; EP 0732361 A 1996 HCAPLUS
 (4) Sumitomo Chem Ind Kk; JP 02117934 A 1990 HCAPLUS
 (5) Vieira, E; US 5096781 A 1992 HCAPLUS
 (6) Yamamoto, N; US 4467061 A 1984 HCAPLUS

IT **104810-48-2P**, Tinuvin 1130
 RL: **IMF (Industrial manufacture); PREP (Preparation)**
 (additive-functionalized organophilic nano-scaled fillers)

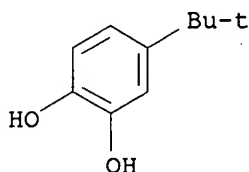
RN 104810-48-2 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy- (9CI) (CA INDEX NAME)

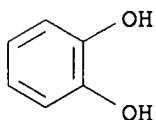


L44 ANSWER 4 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 2002:851330 HCAPLUS
 DN 138:221879
 TI New Effective Binary Formulations for Inhibiting Thermal Polymerization of Styrene
 AU Gogotov, A. F.; Parilova, M. V.; Khaliullin, A. K.
 CS Angarsk Petrochemical Joint-Stock Company, Irkutsk Oblast, Russia
 SO Russian Journal of Applied Chemistry (Translation of Zhurnal Prikladnoi Khimii) (2002), 75(8), 1325-1329
 CODEN: RJACEO; ISSN: 1070-4272
 PB MAIK Nauka/Interperiodica Publishing
 DT Journal
 LA English
 CC 35-3 (Chemistry of Synthetic High Polymers)
 AB Synthesis of effective formulations for inhibiting thermal polymn. of styrene, based on **sterically hindered phenols**, is reported.
 ST styrene polymn binary inhibitor
 IT Polymerization inhibitors
 (effective binary formulations for inhibiting thermal polymn. of styrene)
 IT Mannich bases
 RL: CAT (Catalyst use); USES (Uses)
 (effective binary formulations for inhibiting thermal polymn. of styrene)
 IT 88-27-7, Agidol 3 **98-29-3**, 4-tert-Butylpyrocatechol 119-47-1, Agidol 2 **120-80-9D**, Pyrocatechol, derivs. 128-37-0, Agidol 1, uses
 RL: CAT (Catalyst use); USES (Uses)
 (effective binary formulations for inhibiting thermal polymn. of styrene)
 RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
 (1) Anon; EP 0403672 HCAPLUS
 (2) Anon; RU 2106331 HCAPLUS
 (3) Anon; RU 2128171 HCAPLUS
 (4) Anon; RU 2129112 HCAPLUS
 (5) Anon; RU 2138473 HCAPLUS
 (6) Anon; RU 2149153 HCAPLUS
 (7) Anon; RU 2152377 HCAPLUS
 (8) Anon; US 4409408 HCAPLUS
 (9) Anon; CSSR Inventor's Certificate 259635
 (10) Anon; USSR Inventor's Certificate 441263
 (11) Anon; USSR Inventor's Certificate 968041
 (12) Anon; USSR Inventor's Certificate 562092
 (13) Anon; USSR Inventor's Certificate 819078

- (14) Anon; USSR Inventor's Certificate 681040
 (15) Denisov, E; Okislenie i stabilizatsiya reaktivnykh topliv (Oxidation and Stabilization of Jet Fuels) 1983
 (16) Gogotov, A; Neftepererab Neftekhim 1999, 12, P22
 (17) Gogotov, A; Proizv Ispol'z Elastom 2001, 5, P8 HCAPLUS
 (18) Jones, C; Chem Week 1996, V158(49), P32
 (19) Karakuleva, G; Ingibirovanie polimerizatsii diolefinov v protsessakh ikh vydeleniya i khraneniya (Inhibition of Diolefin Polymerization in the Course of Isolation and Storage) 1974
 (20) Tolstikov, G; Prom--st Sint Kauchuka: Nauch-Tekh Sb 1983, 8, P8 HCAPLUS
 IT 98-29-3, 4-tert-Butylpyrocatechol 120-80-9D,
 Pyrocatechol, derivs.
 RL: CAT (Catalyst use); USES (Uses)
 (effective binary formulations for inhibiting thermal polymn. of styrene)
 RN 98-29-3 HCAPLUS
 CN 1,2-Benzenediol, 4-(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



RN 120-80-9 HCAPLUS
 CN 1,2-Benzenediol (9CI) (CA INDEX NAME)



L44 ANSWER 5 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 2002:140342 HCAPLUS
 DN 136:341407
 TI Effect of compatibilization in injection-molded polycarbonate and liquid crystalline polymer blend
 AU Tan, L. P.; Yue, C. Y.; Tam, K. C.; Lam, Y. C.; Hu, X.
 CS School of Mechanical and Production Engineering, Nanyang Technological University, Singapore, 639798, Singapore
 SO Journal of Applied Polymer Science (2002), 84(3), 568-575
 CODEN: JAPNAB; ISSN: 0021-8995
 PB John Wiley & Sons, Inc.
 DT Journal
 LA English
 CC 37-5 (Plastics Manufacture and Processing)
 AB The effect of compatibilizing polycarbonate (PC) and LC5000, a thermotropic liq. cryst. polymer consisting of 80/20% of hydroxybenzoic acid and poly(terephthalate) with a lab. synthesized compatibilizer was studied. The compatibilizer was synthesized by transesterification of PC and LC5000 with the aid of a catalyst. The effect of compatibilization was investigated by studying the mech. and morphol. properties of

injection-molded plaques with different thicknesses. Substantial improvement was obsd. in the mech. properties after compatibilization. Significant enhancement in the fibrillation was also obsd. in the samples after addn. of compatibilizer. The surface finish of the compatibilized samples was smooth and homogeneous as compared to the uncompatibilized samples. The skin-core phenomenon in the tensile fractured surfaces was less obvious in the former samples, indicating better adhesion and homogeneity. These morphol. studies showed that the mech. properties enhancement lay in improved fibrillation and interfacial adhesion between the dispersed and major phases.

- ST polycarbonate liq crystal polyester blend compatibilization;
hydroxybenzoic acid polyester polycarbonate blend compatibilization
- IT Liquid crystals, polymeric
Polymer blend compatibilizers
Stress-strain relationship
Tensile strength
(compatibilizer effect on mech. properties and morphol. of
injection-molded polycarbonate-liq.-cryst. polyester blends)
- IT Polycarbonates, properties
Polyesters, properties
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(compatibilizer effect on mech. properties and morphol. of
injection-molded polycarbonate-liq.-cryst. polyester blends)
- IT Polymer blends
RL: PRP (Properties)
(compatibilizer effect on mech. properties and morphol. of
injection-molded polycarbonate-liq.-cryst. polyester blends)
- IT Polymer morphology
(fracture-surface; compatibilizer effect on mech. properties and
morphol. of injection-molded polycarbonate-liq.-cryst. polyester
blends)
- IT Fracture surface morphology
(polymeric; compatibilizer effect on mech. properties and morphol. of
injection-molded polycarbonate-liq.-cryst. polyester blends)
- IT 24936-68-3, Makrolon 3200, properties 25037-45-0, Bisphenol A-carbonic
acid copolymer 25822-54-2, LC5000
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(compatibilizer effect on mech. properties and morphol. of
injection-molded polycarbonate-liq.-cryst. polyester blends)
- IT 25822-54-2D, LC5000, transesterification products with
polycarbonates
RL: MOA (Modifier or additive use); USES (Uses)
(compatibilizers; compatibilizer effect on mech.
properties and morphol. of injection-molded polycarbonate-liq.-cryst.
polyester blends)

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Bassett, B; Polym Compos 1990, V11, P10 HCAPLUS
- (2) Beery, D; Polym Eng Sci 1991, V31, P451 HCAPLUS
- (3) Chik, G; J Materials Processing Tech 1997, V63, P488
- (4) Crevecouer, G; Polym Eng Sci 1990, V30, P532
- (5) Datta, A; Polymer 1993, V34, P684
- (6) Dutta, D; Polymer 1996, V37, P1336
- (7) Fiorini, M; Polymer 1997, V38, P413 HCAPLUS
- (8) Golovoy, A; Polym Eng Sci 1992, V32, P854 HCAPLUS
- (9) Grace, H; Chem Eng Commun 1982, V14, P225 HCAPLUS
- (10) Ignatov, V; Polymer 1997, V38, P201 HCAPLUS
- (11) Khan, K; J Appl Polym Sci 1997, V64, P645 HCAPLUS

- (12) Kiss, G; Polym Eng Sci 1987, V27, P410 HCAPLUS
- (13) Lin, Q; Polym Eng Sci 1993, V33, P789 HCAPLUS
- (14) Petrovic, Z; Polym Adv Tech 1995, V6, P91 HCAPLUS
- (15) Seo, Y; Polymer 1995, V36, P525 HCAPLUS
- (16) Stachowski, M; Polym Eng Sci 1997, V37, P252 HCAPLUS
- (17) Taylor, G; Pro Roy Soc London 1934, VA146, P501 HCAPLUS
- (18) Tjong, S; Polym Intern 1997, V42, P209 HCAPLUS
- (19) Weiss, R; Polym Eng Sci 1987, V27, P684 HCAPLUS
- (20) Wiff, D; Polymer 1998, V39, P5069 HCAPLUS
- (21) Winerich, D; Macromol Sci--Phys 1997, VB36(2), P247 HCAPLUS
- (22) Xu, Q; J Mater Proc Tech 1997, V63, P519
- (23) Yi, X; Polym Intern 1996, V39, P11 HCAPLUS

IT 25822-54-2D, LC5000, transesterification products with polycarbonates

RL: MOA (Modifier or additive use); USES (Uses)

(compatibilizers; compatibilizer effect on mech.

properties and morphol. of injection-molded polycarbonate-liq.-cryst. polyester blends)

RN 25822-54-2 HCAPLUS

CN 1,4-Benzenedicarboxylic acid, polymer with 1,2-ethanediol and 4-hydroxybenzoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 107-21-1

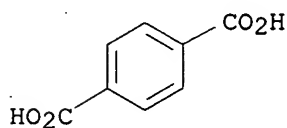
CMF C2 H6 O2

HO-CH₂-CH₂-OH

CM 2

CRN 100-21-0

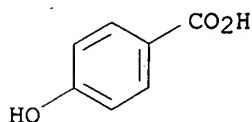
CMF C8 H6 O4



CM 3

CRN 99-96-7

CMF C7 H6 O3



L44 ANSWER 6 OF 57 HCAPLUS. COPYRIGHT 2003 ACS

AN 2002:136883 HCAPLUS

DN 137:33946

TI Flame retardant epoxy polymers based on all phosphorus-containing components

AU Jeng, Ru-Jong; Shau, Shi-Min; Lin, Jiang-Jen; Su, Wen-Chiung; Chiu, Yie-Shun

CS Department of Chemical Engineering, National Chung-Hsing University, Taichung, 402, Taiwan

SO European Polymer Journal (2002), 38(4), 683-693

CODEN: EUPJAG; ISSN: 0014-3057

PB Elsevier Science Ltd.

DT Journal

LA English

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 35

AB A phosphorus-contg. epoxy resin, bis(3-t-butyl-4-glycidyloxy phenyl-2,4-di-t-butylphenyl)resorcinol diphosphate, was synthesized and subsequently cured with non-phosphorus contg. amines, and/or novel phosphorus-contg. arom. or polyoxyalkylene amines. Chem. structures of these materials were characterized with FTIR, NMR, elemental anal., and amine titrn. The introduction of soft -P-O- linkage, polyoxyalkylene, or hard arom. group into the backbones of the synthesized phosphorus-contg. amines provides epoxy polymers with high phosphorus contents and tailored flexibility. Thermal anal. of differential scanning calorimeter and thermal gravimetric anal. (TGA) reveals that these resulted epoxy polymers possess moderate Tgs and thermal stability. Furthermore, high char yields in TGA anal. and high limited oxygen index values indicate that these phosphorus-contg. epoxy polymers possess excellent flame retardant properties. 295801-55-7 295801-56-8 295801-58-0 295801-59-1. P.

ST epoxy resin flame retardant crosslinking oxygen index thermooxidative degrdn

IT Epoxy resins, preparation

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (diamine-crosslinked; flame retardant epoxy polymers based on all phosphorus-contg. components)

IT Crosslinking agents

(fireproofing; flame retardant epoxy polymers based on all phosphorus-contg. components)

IT Fire-resistant materials

Fireproofing agents

Glass transition temperature

(flame retardant epoxy polymers based on all phosphorus-contg. components)

IT Oxygen index

(limiting; flame retardant epoxy polymers based on all phosphorus-contg. components)

IT Air

(thermooxidative degrdn. of flame retardant epoxy polymers based on all phosphorus-contg. components)

IT Polymer degradation

(thermooxidative; flame retardant epoxy polymers based on all phosphorus-contg. components)

IT Chars

(yield of; flame retardant epoxy polymers based on all phosphorus-contg. components)

IT 387354-27-0P 437650-23-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

(crosslinking agent; flame retardant epoxy polymers based on all phosphorus-contg. components)

IT 25068-38-6DP, Bisphenol A-epichlorohydrin copolymer, reaction products with amino-terminated phosphoryloxytrichloride-resorcinol oligomers 36704-31-1P 40364-42-9P 68318-44-5P 202606-42-6DP, NPES 901, reaction products with amino-terminated phosphoryloxytrichloride-resorcinol oligomers 387354-29-2P 437616-09-6P 437616-10-9P 437616-11-0P 437616-12-1P 437616-13-2P 437650-24-3P 437650-25-4P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(flame retardant epoxy polymers based on all phosphorus-contg. components)

IT 824-72-6, Phenylphosphonicdichloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(flame retardant epoxy polymers based on all phosphorus-contg. components)

IT 101-54-2DP, N-Phenyl-1,4-phenylenediamine, reaction products with phosphoryloxytrichloride-resorcinol oligomer and epoxy resins 119524-49-1DP, reaction products with diamines or **sterically hindered phenols** and epoxy resins
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(oligomeric, crosslinking agent; flame retardant epoxy polymers based on all phosphorus-contg. components)

IT 9046-10-0DP, Jeffamine D230, reaction products with phosphoryloxytrichloride-resorcinol oligomer and epoxy resins
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(oligomeric, crosslinking agent; flame retardant epoxy polymers based on all phosphorus-contg. components)

IT 7727-37-9, Nitrogen, uses
RL: NUU (Other use, unclassified); USES (Uses)

(thermooxidative degrdn. of flame retardant epoxy polymers based on all phosphorus-contg. components)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Anon; Handbook of composite 1982
- (2) Camino, G; Polym Degrad Stab 1989, V23, P359 HCAPLUS
- (3) Chin, W; J Polym Sci, Polym Chem Ed 1995, V33, P373 HCAPLUS
- (4) Cho, C; Polym Bull 1998, V41, P45 HCAPLUS
- (5) Cullis, C; The combustion of organic polymers 1981, P241
- (6) Derout, D; J Appl Polym Sci 1996, V62, P1885
- (7) Hastie, W; National Bureau of Standard Final Report 1975, P75
- (8) Horold, S; Polym Degrad Stab 2000, V36, P443
- (9) Jeng, R; J Appl Polym Sci, in press
- (10) Kuo, P; J Appl Polym Sci 1998, V69, P1635 HCAPLUS
- (11) La Rosa, A; Polymer 1999, V40, P4093 HCAPLUS
- (12) Lee, H; Epoxy resins 1959
- (13) Lee, H; Handbook of epoxy resins 1982
- (14) Lewin, M; Flame retardant polymeric materials 1975
- (15) Lin, J; J Appl Polym Sci 2000, V78, P615 HCAPLUS
- (16) Lin, J; J Polym Res 1996, V3, P97
- (17) Lin, J; Polym Degrad Stab 2000, V70, P171 HCAPLUS
- (18) Liu, Y; J Appl Polym Sci 1996, V61, P613 HCAPLUS
- (19) Liu, Y; J Appl Polym Sci 1997, V63, P895 HCAPLUS
- (20) Liu, Y; J Polym Sci, Polym Chem Ed 2001, V39, P1716 HCAPLUS
- (21) Martin, F; J Appl Polym Sci 1968, V12, P143 HCAPLUS
- (22) Mikroyannidis, J; Adv Chem Ser 1984, V208, P351 HCAPLUS

- (23) Mikroyannidis, J; J Appl Polym Sci 1984, V29, P197 HCAPLUS
- (24) Mikroyannidis, J; J Appl Polym Sci 1984, V29, P197 HCAPLUS
- (25) Su, W; US 6124492 2000 HCAPLUS
- (26) Tseng, F; J Appl Polym Sci 1999, V71, P2129 HCAPLUS
- (27) Van Krevelen, D; Chimia 1974, V28, P504 HCAPLUS
- (28) Van Krevelen, D; Polymer 1975, V16, P615 HCAPLUS
- (29) Wang, C; Eur Polym J 2000, V36, P443 HCAPLUS
- (30) Wang, C; J Appl Polym Sci 1996, V59, P215

IT 119524-49-1DP, reaction products with diamines or sterically hindered phenols and epoxy resins

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(oligomeric, crosslinking agent; flame retardant epoxy polymer's based on all phosphorus-contg. components)

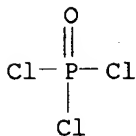
RN 119524-49-1 HCAPLUS

CN Phosphoric trichloride, polymer with 1,3-benzenediol (9CI) (CA INDEX NAME)

CM 1

CRN 10025-87-3

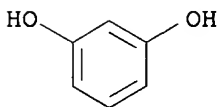
CMF Cl3 O P



CM 2

CRN 108-46-3

CMF C6 H6 O2



L44 ANSWER 7 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 2001:573339 HCAPLUS

DN 135:153822

TI Polyolefin temperature-sensitive materials and their devices

IN Yasui, Keiko; Ito, Masahiko

PA Matsushita Electric Industrial Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L023-26

ICS C08K003-16; C08K003-22; C08K005-13; C08K005-18; C08K005-524;
C08L023-00; C08L023-06; C08L023-12; C08L023-16; C08L025-06;

C08L061-06; H01L035-00; H05B003-00

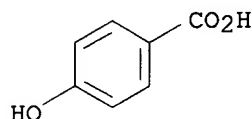
CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001214017	A2	20010807	JP 2000-25927	20000203
PRAI	JP 2000-25927		20000203		
AB	Title materials comprise compns. contg. modified polyolefins having .gtoreq.1 functional groups selected from epoxy, CO ₂ H, and acid anhydride groups and elec. conductors. The materials may comprise compns. contg. polyolefins, elec. conductors, and compatibilizers . The devices comprise the materials, a pair of electrodes, and elec. insulating outer layers. Thus, 100 parts maleated polypropylene and 15 parts p-hydroxybenzoic acid alkyl ester-HCHO copolymer were kneaded and hot pressed to give a test piece showing good stability in application of elec. current and high moisture resistance.				
ST	epoxy modified polyolefin temp sensor moisture resistance; carboxy modified polyolefin temp sensor moisture resistance; maleated polypropylene temp sensor moisture resistance				
IT	Phenols , uses RL: DEV (Device component use); MOA (Modifier or additive use); PRP (Properties); USES (Uses) (hindered , antioxidants; stable polyolefin temp.-sensitive materials with good moisture resistance)				
IT	Electric conductors Temperature sensors Water-resistant materials (stable polyolefin temp.-sensitive materials with good moisture resistance)				
IT	Polyolefins RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (stable polyolefin temp.-sensitive materials with good moisture resistance)				
IT	13598-36-2D, Phosphorous acid, esters, uses 25168-10-9, Naphthylamine RL: DEV (Device component use); MOA (Modifier or additive use); PRP (Properties); USES (Uses) (antioxidants; stable polyolefin temp.-sensitive materials with good moisture resistance)				
IT	106-91-2D, Glycidyl methacrylate, reaction products with polyethylene 9002-88-4D, Polyethylene, reaction products with glycidyl methacrylate 9003-53-6, Polystyrene RL: DEV (Device component use); MOA (Modifier or additive use); PRP (Properties); USES (Uses) (compatibilizers; stable polyolefin temp.-sensitive materials with good moisture resistance)				
IT	50-00-0D, Formaldehyde, reaction products with alkyl hydroxybenzoate, uses 99-96-7D ; p-Hydroxybenzoic acid, alkyl esters, polymers with formaldehyde 1314-13-2, Zinc oxide, uses 10139-47-6, Zinc iodide RL: DEV (Device component use); MOA (Modifier or additive use); PRP (Properties); USES (Uses) (elec. conductors; stable polyolefin temp.-sensitive materials with good moisture resistance)				
IT	108-31-6D, Maleic anhydride, reaction products with polypropylene 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-07-0D, Polypropylene, maleated 9010-79-1, Ethylene-propylene copolymer RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)				

(stable polyolefin temp.-sensitive materials with good moisture resistance)

IT 99-96-7D, p-Hydroxybenzoic acid, alkyl esters, polymers with formaldehyde
 RL: DEV (Device component use); MOA (Modifier or additive use); PRP (Properties); USES (Uses)
 (elec. conductors; stable polyolefin temp.-sensitive materials with good moisture resistance)
 RN 99-96-7 HCAPLUS
 CN Benzoic acid, 4-hydroxy- (9CI) (CA INDEX NAME)



L44 ANSWER 8 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 2001:517707 HCAPLUS
 DN 135:93685
 TI Polymer temperature-sensitive components, and their use in sensors and electric warmers
 IN Yasui, Keiko; Ito, Masahiko; Yamazaki, Tadataka
 PA Matsushita Electric Industrial Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08L077-00
 ICS C08K003-16; C08K003-22; C08K005-18; C08K005-524; C08L023-02; C08L023-06; C08L023-12; C08L023-16; C08L061-08; C08L077-02; F24D013-02; G01K007-16; H01C007-04
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 47, 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001192552	A2	20010717	JP 2000-2160	20000111
PRAI	JP 2000-2160		20000111		

AB The components with good moisture resistance, elec. characteristics, mech. strength, heat-resistant stability, thermal fusibility, and moldability, comprise polyamides, agents for adding elec. cond., agents for inhibiting movement of hydrophilic ions, and optionally (a) polyamide-polyether copolymers or (b) olefin polymers. The sensors have the components placed between electrodes and are used in the elec. warmers. Thus, a sheet contg. nylon 12 100, p-hydroxybenzoic acid alkyl ether-formaldehyde copolymer 15, and thermoplastic silicone 5 parts was placed between a pair of electrodes to give a test piece showing good moisture resistance.
 ST polyether polyamide temp sensor elec warmer; polyolefin polyamide temp sensor elec warmer; hydrophilic ion movement inhibitor polyamide temp sensor; elec cond modifier polyamide temp sensor; silicone ion movement inhibitor nylon temp sensor; hydroxybenzoic acid ester formaldehyde polymer cond modifier
 IT Amides, uses
 RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); USES (Uses)

- (N-alkyl, polymers; polyamide-based temp.-sensitive components for sensors in elec. warmers)
- IT Phenols, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (hindered; polyamide-based temp.-sensitive components for sensors in elec. warmers)
- IT Fluoropolymers, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (hydrophilic ion movement inhibitors; polyamide-based temp.-sensitive components for sensors in elec. warmers)
- IT Polyethers, uses
 RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (polyamide-; polyamide-based temp.-sensitive components for sensors in elec. warmers)
- IT Electric heaters
 Temperature sensors
 (polyamide-based temp.-sensitive components for sensors in elec. warmers)
- IT Polyamides, uses
 Polyolefins
 RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (polyamide-based temp.-sensitive components for sensors in elec. warmers)
- IT Molded plastics, uses
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (polyamide-based temp.-sensitive components for sensors in elec. warmers)
- IT Polyamides, uses
 RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (polyether-; polyamide-based temp.-sensitive components for sensors in elec. warmers)
- IT Polysiloxanes, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (thermoplastic, hydrophilic ion movement inhibitors; polyamide-based temp.-sensitive components for sensors in elec. warmers)
- IT 50-00-0D, Formaldehyde, polymers with hydroxybenzoic acid alkyl esters, uses 99-96-7D, p-Hydroxybenzoic acid, alkyl esters, polymers with formaldehyde 1314-13-2, Zinc oxide, uses 10139-47-6, Zinc iodide
 RL: MOA (Modifier or additive use); USES (Uses)
 (cond. modifiers; polyamide-based temp.-sensitive components for sensors in elec. warmers)
- IT 9002-84-0, Tetrafluoroethylene polymer
 RL: MOA (Modifier or additive use); USES (Uses)
 (hydrophilic ion movement inhibitors; polyamide-based temp.-sensitive components for sensors in elec. warmers)
- IT 947-04-6D, Azacyclotridecan-2-one, polymers with nylon 40 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9010-79-1, Ethylene-propylene copolymer 24937-16-4, nylon 12 25035-04-5, nylon 11 25038-74-8 25587-80-8
 RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (polyamide-based temp.-sensitive components for sensors in elec. warmers)
- IT 6683-19-8, Pentaerythrityl-tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate] 13598-36-2D, Phosphorous acid, esters, uses

25168-10-9D, Naphthylamine, derivs. 36443-68-2, Triethylene glycol-bis[3-(3-tert-butyl-5-methyl-4-hydroxyphenyl)propionate] 37984-67-1, Tetraphenyltetraakis(tridecyl)pentaerythritol tetraphosphite 57077-45-9 179234-08-3D, Bisphenol A-pentaerythritol phosphite copolymer, hydrogenated

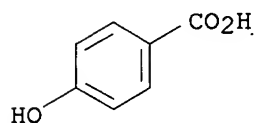
RL: MOA (Modifier or additive use); USES (Uses)
(polyamide-based temp.-sensitive components for sensors in elec. warmers)

IT 99-96-7D, p-Hydroxybenzoic acid, alkyl esters, polymers with formaldehyde

RL: MOA (Modifier or additive use); USES (Uses)
(cond. modifiers; polyamide-based temp.-sensitive components for sensors in elec. warmers)

RN 99-96-7 HCAPLUS

CN Benzoic acid, 4-hydroxy- (9CI) (CA INDEX NAME)



L44 ANSWER 9 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 2001:485352 HCAPLUS

DN 135:78001

TI Macromolecule temperature-sensitive element for temperature-detecting device

IN Ito, Masahiko; Yasui, Keiko; Ohara, Kazuyuki

PA Matsushita Electric Industrial Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G01K007-16

ICS G01K007-16; C08K003-16; C08K003-22; C08K005-13; C08K005-18;
C08K005-524; C08L023-04; C08L023-10; C08L023-16; C08L027-18;
C08L061-10; C08L061-18; C08L071-02; C08L077-02; C08L083-04;
G01K001-14; H01C007-02

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001183243	A2	20010706	JP 1999-369875	19991227
PRAI	JP 1999-369875		19991227		

AB The title element, useful for forming layers between a pair of concentric electrodes of elec. heaters (e.g., elec. blanket, elec. carpet) for temp. control, is prepd. from polyamides (e.g., nylon 12, nylon 11, nylon 12-nylon 40 copolymer, N-alkyl-substituted amide), polyolefins (e.g., polyethylene, polypropylene, ethylene-propylene copolymer) or polyamide-polyethers, elec. conductive additives (e.g., alkyl phenol-formaldehyde copolymer, hydroxybenzoic acid ester-formaldehyde copolymer), water-repelling agents (e.g., PTFE, thermoplastic silicones), and optionally naphthylamine or **hindered phenols**, and/or phosphites.

ST polyolefin polyamide temp sensitive element elec heater; elec conductive

- additive temp sensitive element; water repelling agent temp sensitive element
- IT **Phenols, uses**
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (hindered; macromol. temp.-sensitive element for temp.-detecting device)
- IT Antioxidants
 Electric conductors
 Electric heaters
 Temperature sensors
 (macromol. temp.-sensitive element for temp.-detecting device)
- IT Polyamides, uses
 Polyolefins
 RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (macromol. temp.-sensitive element for temp.-detecting device)
- IT Polyethers, uses
 RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (polyamide-; macromol. temp.-sensitive element for temp.-detecting device)
- IT Polyamides, uses
 RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (polyether-; macromol. temp.-sensitive element for temp.-detecting device)
- IT Polysiloxanes, uses
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (thermoplastic, water-repelling agents; macromol. temp.-sensitive element for temp.-detecting device)
- IT Fluoropolymers, uses
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (water-repelling agents; macromol. temp.-sensitive element for temp.-detecting device)
- IT 6683-19-8, Pentaerythritol tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate] 36443-68-2, Triethylene glycol bis[3-(3-tert-butyl-5-methyl-4-hydroxyphenyl)propionate] 37984-67-1 57077-45-9 179234-08-3D, Bisphenol A-pentaerythritol phosphite copolymer, hydrogenated
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (antioxidants; macromol. temp.-sensitive element for temp.-detecting device)
- IT **99-96-7D**, p-Hydroxybenzoic acid, alkyl ester, polymer with formaldehyde 1314-13-2, Zinc oxide, uses 10139-47-6, Zinc iodide 26045-03-4, p-Chlorophenol-formaldehyde copolymer 31605-34-2, p-Dodecylphenol-formaldehyde copolymer 83790-07-2, Benzoic acid, 4-hydroxy-, octyl ester, polymer with formaldehyde 105751-91-5, Benzoic acid, 4-hydroxy-, octadecyl ester, polymer with formaldehyde
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (elec. conductive agents; macromol. temp.-sensitive element for temp.-detecting device)
- IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9010-79-1, Ethylene-propylene copolymer 24937-16-4, nylon 12 24937-16-4D, nylon

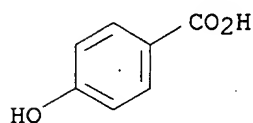
12, polymer with nylon 40 25035-04-5, nylon 11 25038-74-8 25587-80-8
 RL: DEV (Device component use); POF (Polymer in formulation); PRP
 (Properties); TEM (Technical or engineered material use); USES (Uses)
 (macromol. temp.-sensitive element for temp.-detecting device)

IT 25168-10-9, Naphthylamine
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material
 use); USES (Uses)
 (macromol. temp.-sensitive element for temp.-detecting device)

IT 9002-84-0, PTFE
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material
 use); USES (Uses)
 (water-repelling agents; macromol. temp.-sensitive element for
 temp.-detecting device)

IT 99-96-7D, p-Hydroxybenzoic acid, alkyl ester, polymer with
 formaldehyde
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material
 use); USES (Uses)
 (elec. conductive agents; macromol. temp.-sensitive element for
 temp.-detecting device)

RN 99-96-7 HCAPLUS
 CN Benzoic acid, 4-hydroxy- (9CI) (CA INDEX NAME)



L44 ANSWER 10 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 2001:153228 HCAPLUS
 DN 134:311859
 TI Reactive compatibilization of blends of poly(2,6-dimethyl-1,4-phenylene
 ether) and poly(butylene terephthalate)
 AU Van Aert, H. A. M.; Van Steenpaal, G. J. M.; Nelissen, L.; Lemstra, P. J.;
 Liska, J.; Bailly, C.
 CS Eindhoven Polymer Laboratories, Eindhoven University of Technology,
 Eindhoven, 5600 MB, Neth.
 SO Polymer (2001), 42(7), 2803-2813
 CODEN: POLMAG; ISSN: 0032-3861
 PB Elsevier Science Ltd.
 DT Journal
 LA English
 CC 37-6 (Plastics Manufacture and Processing)
 AB This paper deals with the development of a **compatibilized**
 poly(2,6-dimethyl-1,4-phenylene ether) (PPE) poly(butylene terephthalate)
 (PBT) blend with modified PPE as polymer blend **compatibilizer**.
 Blending of PBT with PPE, with PBT as the continuous phase, could yield
 materials which are mutually incompatible, and the phase morphologies
 obtained during blending of these polymers are generally unstable. When
 PPE is **functionalized** selectively, in situ
compatibilization during processing is feasible. Due to the
 formation of segmented copolymers, which act as **compatibilizing**
 agents, stabilization of the morphol. obtained during blending is
 feasible. Different types of reactive PPE polymers were studied, e.g. PPE
 with hydroxyalkyl, carboxylic acid, Me ester, amino and t-BOC protected
 amino end groups. These groups are positioned either in the middle of the

chain or as the end group. All these reactive PPE polymers result in better **compatibilization** after mixing with PBT vs. unfunctionalized PPE. PPEs with carboxylic acid end groups proved to be the most efficiently **compatibilized** with PBT, for the PBT type employed in this study. Promoters, which catalyze or take part in the coupling between PBT and/or **functionalized** PPEs, such as tri-Ph phosphite (TPP), sodium stearate, titanium (IV) isopropoxide and epoxy resins, were used to improve **compatibilization** of the PPE/PBT blends. The use of these promoters proved to give synergetic **compatibilization** in combination with **functionalized** PPEs.

- ST polydimethylphenylene ether polybutylene terephthalate blend reactive compatibilization
- IT Redistribution reaction
 - (catalysts; reactive compatibilization of blends of poly(2,6-dimethyl-1,4-phenylene ether) and poly(butylene terephthalate))
- IT Polyoxyphenylenes
 - RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 - (epoxy-polyester-; reactive compatibilization of blends of poly(2,6-dimethyl-1,4-phenylene ether) and poly(butylene terephthalate))
- IT Polyesters, preparation
 - RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 - (epoxy-polyoxyphenylene-; reactive compatibilization of blends of poly(2,6-dimethyl-1,4-phenylene ether) and poly(butylene terephthalate))
- IT Epoxy resins, preparation
 - RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 - (polyester-polyoxyphenylene-; reactive compatibilization of blends of poly(2,6-dimethyl-1,4-phenylene ether) and poly(butylene terephthalate))
- IT Polymer blend compatibilizers
 - Polymer morphology
 - (reactive compatibilization of blends of poly(2,6-dimethyl-1,4-phenylene ether) and poly(butylene terephthalate))
- IT Polyesters, properties
 - RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 - (reactive compatibilization of blends of poly(2,6-dimethyl-1,4-phenylene ether) and poly(butylene terephthalate))
- IT Polyoxyphenylenes
 - RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 - (reactive compatibilization of blends of poly(2,6-dimethyl-1,4-phenylene ether) and poly(butylene terephthalate))
- IT Polymer blends
 - RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 - (reactive compatibilization of blends of poly(2,6-dimethyl-1,4-phenylene ether) and poly(butylene terephthalate))
- IT Disproportionation catalysts
 - (redistribution reaction catalysts; reactive compatibilization of blends of poly(2,6-dimethyl-1,4-phenylene ether) and poly(butylene terephthalate))
- IT 101-02-0, Triphenyl phosphite 546-68-9, Titanium (IV) isopropoxide 822-16-2, Sodium stearate

RL: MOA (Modifier or additive use); USES (Uses)
(compatibilizer promoter; reactive compatibilization of blends of poly(2,6-dimethyl-1,4-phenylene ether) and poly(butylene terephthalate))

IT 4906-22-3

RL: CAT (Catalyst use); USES (Uses)
(reactive compatibilization of blends of poly(2,6-dimethyl-1,4-phenylene ether) and poly(butylene terephthalate))

IT 24938-67-8, Poly(2,6-dimethyl-1,4-phenylene ether) 24968-12-5,
Poly(butylene terephthalate) 25134-01-4, 2,6-Xylenol homopolymer
26062-94-2, Poly(butylene terephthalate)

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(reactive compatibilization of blends of poly(2,6-dimethyl-1,4-phenylene ether) and poly(butylene terephthalate))

IT 51-67-2DP, 4-Hydroxyphenylethylamine, reaction products with
poly(2,6-dimethyl-1,4-phenylene ether) 126-00-1DP,
4,4-Bis(4-hydroxyphenyl)pentanoic acid, reaction products with
poly(2,6-dimethyl-1,4-phenylene ether) 501-94-0DP, reaction
products with poly(2,6-dimethyl-1,4-phenylene ether) 501-97-3DP,
reaction products with poly(2,6-dimethyl-1,4-phenylene ether)
5597-50-2DP, reaction products with poly(2,6-dimethyl-1,4-phenylene ether)
24938-67-8DP, Poly(2,6-dimethyl-1,4-phenylene ether), hydroxyalkyl,
carboxylic acid, Me ester, amino, or t-BOC protected amino end groups
25134-01-4DP, 2,6-Xylenol homopolymer, hydroxyalkyl, carboxylic acid, Me
ester, amino, or t-BOC protected amino end groups 64318-28-1DP, reaction
products with poly(2,6-dimethyl-1,4-phenylene ether) 102472-32-2DP
, 4,4-Bis(3,5-dimethyl-4-hydroxyphenyl)pentanoic acid, reaction products
with poly(2,6-dimethyl-1,4-phenylene ether) 114349-11-0P,
1,4-Benzenedicarboxylic acid-1,4-butanediol-2,6-Xylenol block copolymer
121917-20-2P, 1,4-Benzenedicarboxylic acid-1,4-butanediol-2,6-Xylenol
graft copolymer 195199-46-3DP, reaction products with
poly(2,6-dimethyl-1,4-phenylene ether) 334885-31-3P,
1,4-Benzenedicarboxylic acid-1,4-butanediol-2,6-Xylenol-Epikote 828
copolymer

RL: POF (Polymer in formulation); PRP (Properties); **SPN (Synthetic preparation); PREP (Preparation);** USES (Uses)
(reactive compatibilization of blends of poly(2,6-dimethyl-1,4-phenylene ether) and poly(butylene terephthalate))

RE.CNT 69 THERE ARE 69 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Aharoni, S; J Polym Sci, Polym Chem Ed 1986, V24, P1281 HCAPLUS
- (2) Akkapeddi, M; Abstr Pap Am Chem Soc 1992, V204, P128
- (3) Akkapeddi, M; Advances in polymer blends and alloys technology 1993, V4, P87 HCAPLUS
- (4) Akkapeddi, M; Polym Prepr, Am Chem Soc, Div 1988, V29, P567 HCAPLUS
- (5) Akkapeddi, M; Polym Prepr, Am Chem Soc, Div 1992, P33
- (6) Angeli, S; Can Pat Appl CA 2,082,735 1993
- (7) Angeli, S; Eur Pat Appl 0,550,207 A1 1993
- (8) Araujo, M; Polymer 1988, V29, P2235
- (9) Arnold-Mauer, B; Eur Pat Appl 0,457,138 A2 1991
- (10) Aycock, D; Can Pat Appl CA 2,082,695 A1 1993
- (11) Aycock, D; Eur Pat Appl EP 0,550,209 A2 1992
- (12) Bikiaris, D; J Polym Sci, Polym Chem Ed 1995, V33, P1705 HCAPLUS
- (13) Blandy, C; J Catal 1994, V150, P150 HCAPLUS
- (14) Blubaugh, J; US 5194517 1993 HCAPLUS
- (15) Bohme, F; Angew Makromol Chem 1995, V228, P117
- (16) Bohme, F; Angew Makromol Chem 1995, V224, P167
- (17) Brown, S; US 5290863 1994 HCAPLUS

- (18) Brown, S; Eur Pat Appl 0,349,717 A2 1989
 - (19) Brown, S; Eur Pat Appl EP 0.349.539 A2 1989
 - (20) Cardi, N; J Appl Polym Sci 1993, V50, P1501 HCAPLUS
 - (21) Colby, R; US 5276089 1994 HCAPLUS
 - (22) Colby, R; Eur Pat Appl 0,530,648 A2 1993
 - (23) Dekkers, M; Polymer 1991, V32, P2150 HCAPLUS
 - (24) Glans, J; US 5037897 1991 HCAPLUS
 - (25) Grace, H; Chem Engng Commun 1982, V14, P225 HCAPLUS
 - (26) Han, C; US 4689372 1987 HCAPLUS
 - (27) Heino, M; Acta Polytechnica Scandinavica, Chemical Technology and Metallurgy Series 1993, 214
 - (28) Inata, H; J Appl Polym Sci 1985, V30, P3325 HCAPLUS
 - (29) Inata, H; J Appl Polym Sci 1986, V32, P4581 HCAPLUS
 - (30) Inata, H; J Appl Polym Sci 1986, V32, P5193 HCAPLUS
 - (31) Inata, H; J Appl Polym Sci 1987, V34, P2609 HCAPLUS
 - (32) Inata, H; J Appl Polym Sci 1987, V34, P2769 HCAPLUS
 - (33) Inata, H; J Appl Polym Sci 1987, V33, P3069 HCAPLUS
 - (34) Ishida, H; US 5084496 1992 HCAPLUS
 - (35) Jacques, B; Makromol Chem, Macromol Symp 1993, V75, P231 HCAPLUS
 - (36) Jacques, B; Polymer 1996, V37, P1189 HCAPLUS
 - (37) Jansen, J; Thesis Eindhoven University of Technology 1993
 - (38) Jiang, R; Polym Engng Sci 1991, V31, P1545 HCAPLUS
 - (39) Jiang, W; J Appl Polym Sci 1995, V58, P537 HCAPLUS
 - (40) Khouri, F; Eur Pat Appl 0. 564,244 A1 1993
 - (41) Khouri, F; Eur Pat Appl EP 0,519,642 A2 1991
 - (42) Komarova, L; Russ Chem Bull 1993, V42, P672
 - (43) Kowalczyk, U; US 5128422 1992 HCAPLUS
 - (44) Kowalczyk, U; Eur Pat Appl 0,391,031 A2 1990
 - (45) Kowalczyk, U; Eur Pat Appl 0,461,422 A2 1991
 - (46) Liang, B; J Appl Polym Sci 1994, V54, P1945 HCAPLUS
 - (47) Liska, J; PTC Int Pat Appl WO 9836015 1998
 - (48) Liu, W; Abstr Papers Am Chem Soc 1993, V206, P308
 - (49) Liu, W; Eur Polym J 1996, V32, P91 HCAPLUS
 - (50) Loontjes, T; Makromol Chem, Macromol Symp 1993, V75, P211
 - (51) Loontjes, T; Polym Bull 1993, V30, P13
 - (52) Pan, L; J Chin Textile Univ 1994, V11, P51
 - (53) Quirk, R; Contemp Top Polym Sci 1989, V6, P107 HCAPLUS
 - (54) Shuster, M; J Appl Polym Sci 1994, V52, P1383 HCAPLUS
 - (55) Siling, M; Uspekhi Khii 1996, V65, P296 HCAPLUS
 - (56) Steward, M; Polym Engng Sci 1993, V33, P675
 - (57) Sugio, A; Eur Pat Appl 0,148,774 B1 1985
 - (58) Sybert, P; US 5015698 1991 HCAPLUS
 - (59) Sybert, P; PTC Int Pat Appl WO 87/07279 1987
 - (60) Sybert, P; PTC Int Pat Appl WO 87/07280 1987
 - (61) Sybert, P; PTC Int Pat Appl WO 87/07286 1987
 - (62) Taubitz, C; DE 3702263 1988 HCAPLUS
 - (63) Tsukahara, T; Eur Pat Appl EP 0,530,442 A1 1992
 - (64) van Aert, H; Buning Macromolecules 1995, V28, P7967 HCAPLUS
 - (65) van Aert, H; Macromolecules 1997, V30, P6056 HCAPLUS
 - (66) van Aert, H; Thesis Eindhoven University of Technology 1997
 - (67) Yamahita, Y; Polym Prepr, Am Chem Soc, Div 1990, P31
 - (68) Yates, B; Eur Pat Appl 0,550,208 A1 1993
 - (69) Yates, J; Can Pat Appl CA 2,082,735 1991
- IT 126-00-1DP, 4,4-Bis(4-hydroxyphenyl)pentanoic acid, reaction products with poly(2,6-dimethyl-1,4-phenylene ether) 501-94-ODP, reaction products with poly(2,6-dimethyl-1,4-phenylene ether) 501-97-3DP, reaction products with poly(2,6-dimethyl-1,4-phenylene ether) 102472-32-2DP, 4,4-Bis(3,5-dimethyl-4-

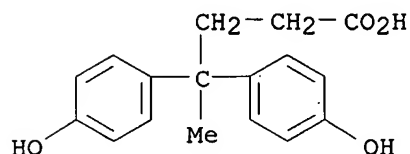
hydroxyphenyl)pentanoic acid, reaction products with poly(2,6-dimethyl-1,4-phenylene ether)

RL: POF (Polymer in formulation); PRP (Properties); **SPN (Synthetic preparation); PREP (Preparation);** USES (Uses).

(reactive **compatibilization** of blends of poly(2,6-dimethyl-1,4-phenylene ether) and poly(butylene terephthalate))

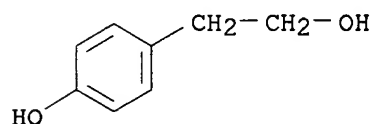
RN 126-00-1 HCAPLUS

CN Benzenebutanoic acid, 4-hydroxy-.gamma.-(4-hydroxyphenyl)-.gamma.-methyl- (9CI) (CA INDEX NAME)



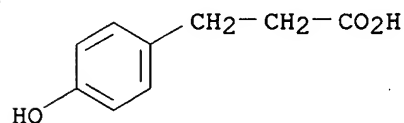
RN 501-94-0 HCAPLUS

CN Benzenethanol, 4-hydroxy- (9CI) (CA INDEX NAME)



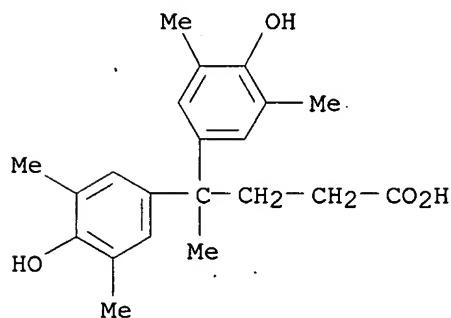
RN 501-97-3 HCAPLUS

CN Benzenepropanoic acid, 4-hydroxy- (9CI) (CA INDEX NAME)



RN 102472-32-2 HCAPLUS

CN Benzenebutanoic acid, 4-hydroxy-.gamma.-(4-hydroxy-3,5-dimethylphenyl)-.gamma.,3,5-trimethyl- (9CI) (CA INDEX NAME)



AN 2001:115207 HCAPLUS
 DN 134:148029
 TI Process for the production of polyester block copolymers, polyester block copolymer compositions and process for the preparation thereof
 IN Kotani, Kazuya; Watanabe, Jun; Sakane, Masanori
 PA Daicel Chemical Industries, Ltd., Japan
 SO PCT Int. Appl., 128 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 IC ICM C08G063-02
 ICS C08K005-1515; C08L067-00
 CC 35-8 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001010927	A1	20010215	WO 2000-JP5230	20000804
	W: CN, KR, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	JP 2001049092	A2	20010220	JP 1999-223055	19990805
	JP 2001081296	A2	20010327	JP 1999-257669	19990910
	JP 2001342330	A2	20011214	JP 2000-166787	20000602
	JP 2002003605	A2	20020109	JP 2000-187020	20000621
	EP 1120432	A1	20010801	EP 2000-949988	20000804
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	JP 1999-223055	A	19990805		
	JP 1999-257669	A	19990910		
	JP 2000-166787	A	20000602		
	JP 2000-187020	A	20000621		
	WO 2000-JP5230	W	20000804		
AB	A process for the prodn. of polyester block copolymers by the addn. polymn. of a cryst. arom. polyester with a lactone; and polyester block copolymer compns. are claimed. Thus, 60 kg PBT comprising terephthalic acid, isophthalic acid, and 1,4-butanediol components and 42.6 kg .epsilon.-caprolactone were reacted at 230.degree. for 54 min under N2 to give a block polyester with unreacted caprolactone 2.61%, acid value 1.80 mg-KOH/g, melting peak temp. 204.4.degree., and melting starting temp. 189.0.degree., and melt index 2.5 g/10 min.				
ST	polyester block polymer prepn; PBT polybutylene terephthalate caprolactone block copolymer prepn				
IT	Amines, uses				
	RL: MOA (Modifier or additive use); USES (Uses) (arom., stabilizers; prepn. of block polyesters and their compns. contg.)				
IT	Polyesters, preparation				
	RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (block, optionally reaction products with epoxy compds.; prepn. of block polyesters and their compns.)				
IT	Molding of plastics and rubbers				
	(blow; prepn. of block polyesters and their compns. for)				
IT	Polyesters, preparation				
	RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)				

- (epoxy; prepn. of block polyesters and their compns.)
- IT Heaters
(heat sensitive materials for; prepn. of block polyesters and their compns. for)
- IT Amines, uses
Phenols, uses
RL: MOA (Modifier or additive use); USES (Uses)
(**hindered**, stabilizers; prepn. of block polyesters and their compns. contg.)
- IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(polyester-, block, optionally reaction products with epoxy compds.; prepn. of block polyesters and their compns.)
- IT Epoxy resins, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyester-; prepn. of block polyesters and their compns.)
- IT Polyesters, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(polyoxyalkylene-, block, optionally reaction products with epoxy compds.; prepn. of block polyesters and their compns.)
- IT Complexing agents
Stabilizing agents
(prepn. of block polyesters and their compns. contg.)
- IT 2162-74-5, Stabaxol 1 6629-10-3, Oxalic acid bis(benzylidenehydrazide) 32687-78-8, N,N'-Bis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionyl]hydrazine 36411-52-6, 3-(N-Salicyloyl)amino-1,2,4-triazole 63245-38-5
RL: MOA (Modifier or additive use); USES (Uses)
(complexing agent; prepn. of block polyesters and their compns. contg.)
- IT 26761-45-5DP, Cardura E 10, reaction products with block polyesters 27103-66-8DP, Epomik R 540, reaction products with block polyesters 324001-84-5DP, reaction products with epoxy compds. 324001-85-6DP, reaction products with epoxy compds. **324001-86-7DP**, reaction products with epoxy compds. 324574-66-5P 324574-67-6P 324574-68-7P 324574-70-1P 324574-72-3P 324574-73-4P **324574-74-5P**
RL: IMF (**Industrial manufacture**); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (**Preparation**); USES (Uses)
(prepn. of block polyesters and their compns.)
- IT 106465-17-2P, 1,4-Butanediol-dimethyl terephthalate-poly(tetramethylene glycol) block copolymer 324001-84-5P 324001-85-6P **324001-86-7P**
RL: IMF (**Industrial manufacture**); RCT (Reactant); PREP (**Preparation**); RACT (Reactant or reagent)
(prepn. of block polyesters and their compns.)
- IT 6683-19-8, Irganox 1010 39319-83-0, Advastab
RL: MOA (Modifier or additive use); USES (Uses)
(stabilizer; prepn. of block polyesters and their compns. contg.)
- RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
- RE
- (1) Toray Industries Inc; JP 04275326.A 1992 HCAPLUS
(2) Toray Industries Inc; JP 543781 A 1993
- IT **324001-86-7DP**, reaction products with epoxy compds.
324574-74-5P
RL: IMF (**Industrial manufacture**); POF (Polymer in formulation);

TEM (Technical or engineered material use); **PREP (Preparation);**
 USES (Uses)

(prepn. of block polyesters and their compns.)

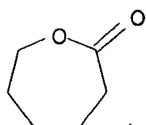
RN 324001-86-7 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with 1,4-benzenedicarboxylic acid,
 1,4-butanediol, 2,4-dihydroxybenzoic acid and 2-oxepanone, block (9CI)
 (CA INDEX NAME)

CM 1

CRN 502-44-3

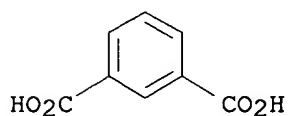
CMF C6 H10 O2



CM 2

CRN 121-91-5

CMF C8 H6 O4



CM 3

CRN 110-63-4

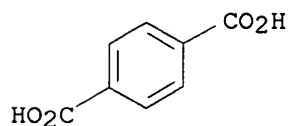
CMF C4 H10 O2

HO-(CH₂)₄-OH

CM 4

CRN 100-21-0

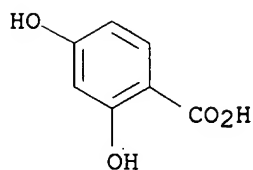
CMF C8 H6 O4



CM 5

CRN 89-86-1

CMF C7 H6 O4



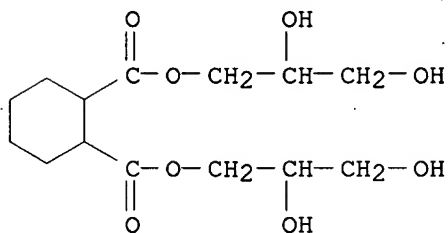
RN 324574-74-5 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with 1,4-benzenedicarboxylic acid, 1,4-butanediol, 2,4-dihydroxybenzoic acid and 2-oxepanone, 1,2-cyclohexanediylbis[carbonyloxy(2-hydroxy-3,1-propanediyl)] 2-hydroxy-3-[(1-oxoneodecyl)oxy]propyl ester, block (9CI) (CA INDEX NAME)

CM 1

CRN 324574-71-2

CMF C14 H24 O8

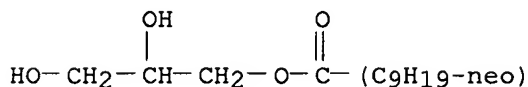


CM 2

CRN 79245-77-5

CMF C13 H26 O4

CCI IDS



CM 3

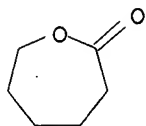
CRN 324001-86-7

CMF (C8 H6 O4 . C8 H6 O4 . C7 H6 O4 . C6 H10 O2 . C4 H10 O2)x

CCI PMS

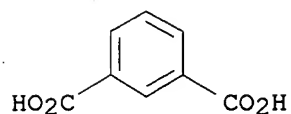
CM 4

CRN 502-44-3
CMF C6 H10 O2



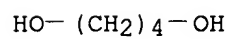
CM 5

CRN 121-91-5
CMF C8 H6 O4



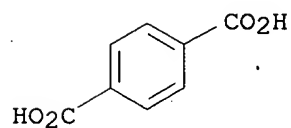
CM 6

CRN 110-63-4
CMF C4 H10 O2



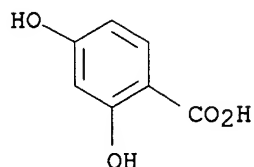
CM 7

CRN 100-21-0
CMF C8 H6 O4



CM 8

CRN 89-86-1
CMF C7 H6 O4



IT 324001-86-7P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP
(Preparation); RACT (Reactant or reagent)
(prepn. of block polyesters and their compns.)

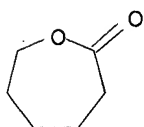
RN 324001-86-7 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with 1,4-benzenedicarboxylic acid,
1,4-butanediol, 2,4-dihydroxybenzoic acid and 2-oxepanone, block (9CI)
(CA INDEX NAME)

CM 1

CRN 502-44-3

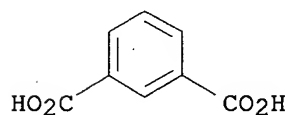
CMF C6 H10 O2



CM 2

CRN 121-91-5

CMF C8 H6 O4



CM 3

CRN 110-63-4

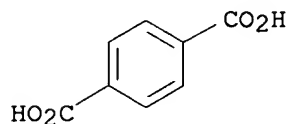
CMF C4 H10 O2

HO-(CH₂)₄-OH

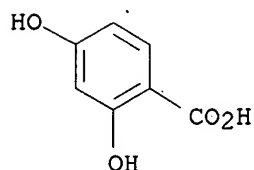
CM 4

CRN 100-21-0

CMF C8 H6 O4



CM 5

CRN 89-86-1
CMF C7 H6 O4

L44 ANSWER 12 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 2000:713752 HCAPLUS
 DN 134:223411
 TI Sterically hindered hydrocarbyloxyamine stabilizers
 AU Anon.
 CS UK
 SO Research Disclosure (2000), 437(Sept.), P1632-P1659 (No. 437087)
 CODEN: RSDSBB; ISSN: 0374-4353
 PB Kenneth Mason Publications Ltd.
 DT Journal; Patent
 LA English
 CC 37-6 (Plastics Manufacture and Processing)
 . PATENT NO. KIND DATE APPLICATION NO. DATE

PI RD 437087 20000910

PRAI RD 2000-437087 20000910

OS MARPAT 134:223411

AB Certain sterically hindered hydrocarbyloxyamine stabilizers are disclosed efficacious towards stabilizing org. material subject to degrdn. induced by light, heat or oxidn.

ST hydrocarbyloxyamine photo heat stabilizer antioxidant polymer; amine hindered stabilizer antioxidant plastic

IT Hydroquinones

Phenols, uses

RL: TEM (Technical or engineered material use); USES (Uses)
 (alkyl; **sterically hindered** hydrocarbyloxyamine stabilizers)

IT Phenols, uses

RL: TEM (Technical or engineered material use); USES (Uses)
 (amino, acyl-; **sterically hindered** hydrocarbyloxyamine stabilizers)

IT Amines, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(hindered; sterically hindered hydrocarbyloxyamine stabilizers)

IT Amines, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (phenolic, acyl-; **sterically hindered**
 hydrocarbyloxyamine stabilizers)

IT Antioxidants
 Heat stabilizers
 UV stabilizers
 (sterically hindered hydrocarbyloxyamine stabilizers)

IT Plastics, uses
 RL: POF (Polymer in formulation); USES (Uses)
 (sterically hindered hydrocarbyloxyamine stabilizers)

IT Amine oxides
 RL: TEM (Technical or engineered material use); USES (Uses)
 (sterically hindered hydrocarbyloxyamine stabilizers)

IT Nitrones
 RL: TEM (Technical or engineered material use); USES (Uses)
 (sterically hindered hydrocarbyloxyamine stabilizers)

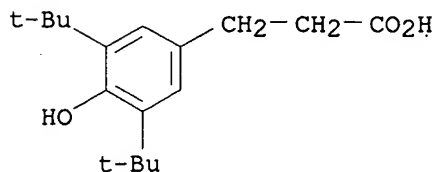
IT Polymers, uses
 RL: POF (Polymer in formulation); USES (Uses)
 (sterically hindered hydrocarbyloxyamine stabilizers for)

IT 65-85-0D, Benzoic acid, substituted, esters, uses 79-10-7D, Acrylic
 acid, esters 108-98-5D, **Thiophenol**, ethers 117-99-7D,
 derivs. 141-82-2D, Malonic acid, esters 144-62-7D, Oxalic acid,
 diamides, uses 6303-21-5D, Phosphinic acid, derivs. 7031-93-8D,
 derivs. 7440-02-0D, Nickel, compds., uses 7803-49-8D, Hydroxylamine,
 derivs., uses 10096-91-0D, derivs. 13598-36-2D, Phosphonic acid,
 derivs. 14848-04-5D, derivs. **20170-32-5D**, .beta.-(3,5-Di-tert-
 butyl-4-hydroxyphenyl)propionic acid, esters and amides
24794-55-6D, esters
 RL: TEM (Technical or engineered material use); USES (Uses)
 (**sterically hindered** hydrocarbyloxyamine
 stabilizers)

IT **20170-32-5D**, .beta.-(3,5-Di-tert-butyl-4-hydroxyphenyl)propionic
 acid, esters and amides **24794-55-6D**, esters
 RL: TEM (Technical or engineered material use); USES (Uses)
 (sterically hindered hydrocarbyloxyamine stabilizers)

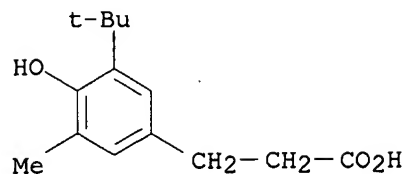
RN 20170-32-5 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy- (9CI) (CA
 INDEX NAME)



RN 24794-55-6 HCAPLUS

CN Benzenepropanoic acid, 3-(1,1-dimethylethyl)-4-hydroxy-5-methyl- (9CI)
 (CA INDEX NAME)



L44 ANSWER 13 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 2000:468114 HCAPLUS

DN 133:74834

TI Halogen-free fire-resistant low-smoking polyolefin compositions for automobile cables

IN Labastida Sanchez, Fernando; Perez Sanchez, Alfonso

PA Servicios Condomex S.A. de C.V., Mex.

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L023-04

ICS C08K003-22; C08K003-26; C08K003-34; C08K005-09; C08K005-13;
C08K005-14; C08K005-3432; C08K005-3445; C08K005-36; C08K005-524;
C08K005-5415; C08L023-10; C08L023-16; C08L031-04; C08L083-04;
C08L091-06; H01B003-44

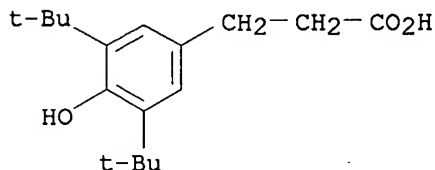
CC 37-6 (Plastics Manufacture and Processing)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000191845	A2	20000711	JP 1998-373199	19981228
PRAI	JP 1998-373199		19981228		
AB	The title compns. comprise (a) ethylene-C2-6 vinyl ester copolymer (e.g., EVA), LDPE, polyethylene, and/or polypropylene 100, (b) hydrated inorg. fillers (e.g., alumina trihydrate) 80-400, (c) alkoxy silanes [e.g., vinyltrimethoxysilane, vinyltriethoxysilane, tris(2-methoxyethoxy)phenylsilane, Me triethoxysilane, methyltris(2-methoxyethoxy)silane, dimethyldiethoxysilane, ethyltrimethoxysilane] 0.5-5, (d) hardeners [e.g., org. peroxides, dicumyl peroxide, .alpha.,.alpha.'-bis(tert-Bu peroxy)diisopropylbenzene] 1-8, and (e) lubricants comprising C8-22 fatty acids or derivs. (e.g., Ca stearate), low-mol.-wt. silicones, and microcryst. wax or paraffins 1-8 parts.				
ST	halo free fire resistant polyolefin compn; automobile cable protection low smoking polyolefin compn; alumina alkoxy silane fire resistant polyolefin compn				
IT	Silanes RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses) (alkoxy, coupling agents; halo-free fire-resistant low-smoking polyolefin compns. for automobile cables)				
IT	Antioxidants Coupling agents Crosslinking agents Fire-resistant materials Lubricants (halo-free fire-resistant low-smoking polyolefin compns. for automobile cables)				
IT	Polyolefins				

- RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(halo-free fire-resistant low-smoking polyolefin compns. for automobile cables)
- IT **Phenols**, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(**hindered**, antioxidants; halo-free fire-resistant low-smoking polyolefin compns. for automobile cables)
- IT Paraffin waxes, uses
Polysiloxanes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(lubricants; halo-free fire-resistant low-smoking polyolefin compns. for automobile cables)
- IT Hydrocarbon waxes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(microcryst., lubricants; halo-free fire-resistant low-smoking polyolefin compns. for automobile cables)
- IT Electric cables
(of automobiles; halo-free fire-resistant low-smoking polyolefin compns. for automobile cables)
- IT Peroxides, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(org., hardeners; halo-free fire-resistant low-smoking polyolefin compns. for automobile cables)
- IT 147-47-7, 1,2-Dihydro-2,2,4-trimethylquinoline **20170-32-5D**,
(3,5-Di-tert-butyl-4-hydroxyphenyl)propionic acid, 2,2'-thiodiethyl ester
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(antioxidants; halo-free fire-resistant low-smoking polyolefin compns. for automobile cables)
- IT 78-08-0, Vinyltriethoxysilane 78-62-6, Dimethyldiethoxysilane
2031-67-6, Methyl triethoxysilane 2768-02-7, Vinyltrimethoxysilane
5314-55-6, Ethyltrimethoxysilane 17903-05-8, Tris(2-methoxyethoxy)phenylsilane 17980-64-2, Methyltris(2-methoxyethoxy)silane
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(coupling agents; halo-free fire-resistant low-smoking polyolefin compns. for automobile cables)
- IT 21645-51-2, Alumina trihydrate, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(halo-free fire-resistant low-smoking polyolefin compns. for automobile cables)
- IT 9003-07-0, Polypropylene 24937-78-8, Ethylene-vinyl acetate copolymer
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(halo-free fire-resistant low-smoking polyolefin compns. for automobile cables)
- IT 80-43-3, Dicumyl peroxide 25155-25-3, .alpha.,.alpha.'-Bis(tert-butyl peroxy)diisopropylbenzene
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(hardeners; halo-free fire-resistant low-smoking polyolefin compns. for automobile cables)

- IT 9002-88-4, Polyethylene
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (low-d.; halo-free fire-resistant low-smoking polyolefin compns. for automobile cables)
- IT 1592-23-0, Calcium stearate
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (lubricants; halo-free fire-resistant low-smoking polyolefin compns. for automobile cables)
- IT 20170-32-5D, (3,5-Di-tert-butyl-4-hydroxyphenyl)propionic acid, 2,2'-thiodiethyl ester
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (antioxidants; halo-free fire-resistant low-smoking polyolefin compns. for automobile cables)
- RN 20170-32-5 HCAPLUS
- CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy- (9CI) (CA INDEX NAME)



- L44 ANSWER 14 OF 57 HCAPLUS COPYRIGHT 2003 ACS
- AN 2000:381558 HCAPLUS
- DN 133:267770
- TI Amine-free stabilization systems for scorch resistance and color improvement of polyurethane flexible foams
- CS Ciba Specialty Chemicals, Corporation Additives Division, Ciba Specialty Chemicals, Tarrytown, NY, 10591-9005, USA
- SO Research Disclosure (2000), 433(May), P858 (No. 433053)
 CODEN: RSDSBB; ISSN: 0374-4353
- PB Kenneth Mason Publications Ltd.
- DT Journal; Patent
- LA English
- CC 38-3 (Plastics Fabrication and Uses)
- | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------|------|----------|-----------------|------|
| PI RD 433053 | | 20000510 | | |
| PRAI RD 2000-433053 | | 20000510 | | |
- AB Tertiary blends of a phosphite (phosphoric acid, bis-(2,4-di-t-Bu-6-Me Ph) Et ester) with a **hindered phenol** (benzene propanoic acid, 3,5-bis(1,1-dimethyl)-4-hydroxy-C7-C9 branched alkyl esters), and a benzofuranone (3-aryl-benzofuran-2-one) exhibited superior light and gas-fade stability in polyether and polyester polyol based polyurethane flexible foams when compared to stabilization systems contg. a di-Ph amine. These amine free systems also provide excellent scorch resistance. Yellowness index values are given for a no. of formulations, including some with di-Ph amine. Also, alternative **hindered phenols**, di-Ph amines, and phosphites are listed.
- ST polyurethane foam amine free stabilization system scorch resistance

improvement; color improvement polyurethane foam amine free stabilization system; phosphite phenol benzofuranone tertiary blend stabilization system polyurethane foam

IT Polyurethanes, uses

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(foams; tertiary blends with a phosphite, a **hindered phenol**, and a benzofuranone as amine-free stabilization systems for scorch resistance and color improvement of polyurethane flexible foams)

IT Phenols, uses

Phosphites

RL: MOA (Modifier or additive use); USES (Uses)
(for tertiary blends with a phosphite, a **hindered phenol**, and a benzofuranone as amine-free stabilization systems for scorch resistance and color improvement of polyurethane flexible foams)

IT Plastic foams

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(tertiary blends with a phosphite, a **hindered phenol**, and a benzofuranone as amine-free stabilization systems for scorch resistance and color improvement of polyurethane flexible foams)

IT 128-37-0, BHT, uses 2082-79-3, Octadecyl-3-(3,5-di-tert-butyl-4-hydroxy phenyl)-propionate 6683-19-8, Pentaerythritol tetrakis (3-(3,5-di-tert-butyl-4-hydroxy phenyl)-propionate) 41484-35-9, 2,2'-Thiodiethylene bis [3-(3,5-di-tert-butyl-4-hydroxy phenyl)-propionate]

RL: MOA (Modifier or additive use); USES (Uses)
(**hindered phenol** together with a phosphite and a benzofuranone in tertiary blends as amine-free stabilization systems for scorch resistance and color improvement of polyurethane flexible foams)

IT 145650-60-8

RL: MOA (Modifier or additive use); USES (Uses)
(in tertiary blend with a **hindered phenol** and a benzofuranone; amine-free stabilization systems for scorch resistance and color improvement of polyurethane flexible foams)

IT 20170-32-5D, Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, C7-9-branched alkyl esters

RL: MOA (Modifier or additive use); USES (Uses)
(in tertiary blend with a phosphite and a benzofuranone; amine-free stabilization systems for scorch resistance and color improvement of polyurethane flexible foams)

IT 163489-63-2D, 2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-hydroxy-, reaction products with xylene

RL: MOA (Modifier or additive use); USES (Uses)
(in tertiary blend with a phosphite and a **hindered phenol**; amine-free stabilization systems for scorch resistance and color improvement of polyurethane flexible foams)

IT 26523-78-4, Tris(nonylphenyl) phosphite 26544-23-0, Isodecyl diphenyl phosphite 26544-27-4, Diisodecyl pentaerythritol diphosphite 36788-39-3, Tris(dipropylene glycol) phosphite 239107-18-7

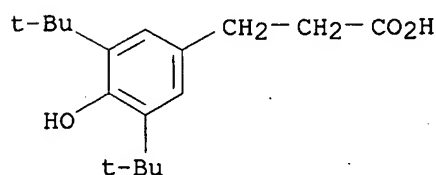
RL: MOA (Modifier or additive use); USES (Uses)
(phosphite together with a **hindered phenol** and a benzofuranone in tertiary blends as amine-free stabilization systems for scorch resistance and color improvement of polyurethane flexible foams)

IT 20170-32-5D, Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, C7-9-branched alkyl esters

RL: MOA (Modifier or additive use); USES (Uses)
 (in tertiary blend with a phosphite and a benzofuranone; amine-free stabilization systems for scorch resistance and color improvement of polyurethane flexible foams)

RN 20170-32-5 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy- (9CI) (CA INDEX NAME)



L44 ANSWER 15 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 1999:795882 HCAPLUS

DN 132:36250

TI Carboxy-**functionalized** polyphenylene ethers and their use as **compatibilizers** in polymer blends

IN Yeager, Gary William; Pan, Yiqun

PA General Electric Company, USA

SO PCT Int. Appl., 18 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C08G065-48

ICS C08G065-44

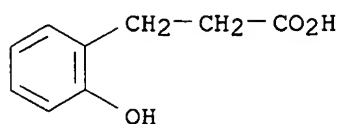
CC 35-8 (Chemistry of Synthetic High **Polymers**)

Section cross-reference(s): 37

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9964494	A1	19991216	WO 1999-US9513	19990430
	W: AU, CN, JP, KR, SG				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6063875	A	20000516	US 1998-96149	19980611
	AU 9937770	A1	19991230	AU 1999-37770	19990430
	EP 1086160	A1	20010328	EP 1999-920223	19990430
	R: DE, ES, FR, GB, IT, NL				
	JP 2002517579	T2	20020618	JP 2000-553495	19990430
	US 6268463	B1	20010731	US 1999-426474	19991026
	US 2001034430	A1	20011025	US 2001-871378	20010531
	US 6552133	B2	20030422		
	US 2001034418	A1	20011025	US 2001-871379	20010531
PRAI	US 1998-96149	A	19980611		
	WO 1999-US9513	W	19990430		
	US 1999-426474	A3	19991026		
AB	Carboxy- functionalized polyphenylene ethers contg. structural units with a carboxyalkyl group in the 2-position are prepd. by redistribution of a polyphenylene ether with a 2-carboxyalkylphenol such as melilotic acid, or by oxidative coupling of a suitable phenol with such a 2-carboxyalkylphenol. The products form compatibilizing copolymers with polymers contg. carboxylic acid-reactive				

- functional groups, such as polyesters, polyamides and epoxy resins.
- ST polyphenylene ether carboxyl contg prepn; melilotic acid carboxyl contg polyphenylene ether manuf; phenol carboxylalkyl polyphenylene ether redistribution
- IT Epoxy resins, uses
RL: POF (Polymer in formulation); USES (Uses)
(bromine-contg.; carboxy-**functionalized** polyphenylene ethers and their use as **compatibilizers** in polymer blends)
- IT Polymer blend **compatibilizers**
(carboxy-**functionalized** polyphenylene ethers and their use as **compatibilizers** in polymer blends)
- IT Polymer blends
RL: IMF (Industrial manufacture); PREP (Preparation)
(carboxy-**functionalized** polyphenylene ethers and their use as **compatibilizers** in polymer blends)
- IT Polyoxyphenylenes
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(carboxy-**functionalized** polyphenylene ethers and their use as **compatibilizers** in polymer blends)
- IT Epoxy resins, uses
Phenolic resins, uses
RL: POF (Polymer in formulation); USES (Uses)
(carboxy-**functionalized** polyphenylene ethers and their use as **compatibilizers** in polymer blends)
- IT 495-78-3DP, Melilotic acid, redistribution reaction products with polyphenylene ethers 24938-67-8DP, Poly(2,6-dimethyl-1,4-phenylene ether), redistribution reaction products with melilotic acid 25134-01-4DP, redistribution reaction products with melilotic acid
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(carboxy-**functionalized** polyphenylene ethers and their use as **compatibilizers** in polymer blends)
- IT 33294-14-3, DER 542 39362-23-7, Araldite EPN 1138
RL: POF (Polymer in formulation); USES (Uses)
(carboxy-**functionalized** polyphenylene ethers and their use as **compatibilizers** in polymer blends)
- IT 94-36-0, Benzoyl peroxide, uses 4906-22-3
RL: CAT (Catalyst use); USES (Uses)
(prepn. of carboxy-**functionalized** polyphenylene ethers)
- RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
- (1) Gen Electric; GB 1237385 A 1971 HCAPLUS
(2) Gen Electric; EP 0315822 A 1989 HCAPLUS
(3) Liska Juraj; WO 9836015 A 1998 HCAPLUS
- IT 495-78-3DP, Melilotic acid, redistribution reaction products with polyphenylene ethers
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(carboxy-**functionalized** polyphenylene ethers and their use as **compatibilizers** in polymer blends)
- RN 495-78-3 HCAPLUS
CN Benzenepropanoic acid, 2-hydroxy- (9CI) (CA INDEX NAME)



- L44 ANSWER 16 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1999:437437 HCAPLUS
 DN 131:229535
 TI Morphology and rheology of HDPE/LCP blends compatibilized by a novel PE-g-LCP copolymer
 AU Minkova, L. I.; Velcheva, M.; Paci, M.; Magagnini, P.; La Mantia, F. P.; Sek, D.
 CS Institute of Polymers, Bulgarian Academy of Sciences, Sofia, Bulg.
 SO Journal of Applied Polymer Science (1999), 73(11), 2069-2077
 CODEN: JAPNAB; ISSN: 0021-8995
 PB John Wiley & Sons, Inc.
 DT Journal
 LA English
 CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): 36
 AB A novel graft copolymer (PE-g-LCP) consisting of polyethylene (PE) backbones and liq. cryst. polymer (LCP) branches was synthesized via reactive blending of an acrylic acid-**functionalized** PE (Escor 5000 by Exxon) with a semiflexible LCP (SBH 1: 1: 2 by Eniricerche S.p.A.). The crude reactive blending product (COP) was shown by investigation of the fractions sol. in boiling toluene and xylene and of the residue to contain unreacted Escor and SBH, together with the graft copolymer forming the interphase. The **compatibilizing** activity of COP for PE/SBH blends, compared to that of pure Escor, was investigated using two PE grades. The COP addn. into 80/20 PE/SBH blends caused a much stronger redn. of the SBH droplet dimensions and morphol. stabilization than did that of pure Escor. The rheol. behavior of the samples showed that COP leads to a slight increase of interfacial adhesion in the melt as well and that the effect is more pronounced when lower molar mass PE grade is used as the blend matrix. Melt-spinning tests demonstrated that deformation of the SBH droplets into highly oriented fibrils can be obtained for the blends of lower molar mass PE, **compatibilized** with small amts. of the novel PE-g-SBH copolymer.
 ST graft polymn liq cryst polyester acrylic **functionalized** polyethylene; interface polymn reactive grafting polyethylene polyester blend **compatibilization**; HDPE grafted polyester **compatibilized** blend morphol rheol fiber extrusion
 IT Polyolefin fibers
 Polyolefin fibers
 Synthetic polymeric fibers, properties
 Synthetic polymeric fibers, properties
 RL: PRP (Properties)
 (acrylic acid-ethylene, graft, extruded; morphol. and rheol. of acrylic acid-**functionalized** HDPE-liq.-cryst. polyester blends **compatibilized** by a novel PE-g-LCP copolymer)
 IT Polymer morphology
 (fracture-surface; morphol. and rheol. of acrylic acid-**functionalized** HDPE-liq.-cryst. polyester blends **compatibilized** by a novel PE-g-LCP copolymer)
 IT Polyester fibers, properties

- RL: PRP (Properties)
(graft polymers, extruded; morphol. and rheol. of acrylic acid-**functionalized** HDPE-liq.-cryst. polyester blends **compatibilized** by a novel PE-g-LCP copolymer)
- IT Polymerization
(graft, interface; morphol. and rheol. of acrylic acid-**functionalized** HDPE-liq.-cryst. polyester blends **compatibilized** by a novel PE-g-LCP copolymer)
- IT Polyesters, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(graft; morphol. and rheol. of acrylic acid-**functionalized** HDPE-liq.-cryst. polyester blends **compatibilized** by a novel PE-g-LCP copolymer)
- IT Crystallization enthalpy
Differential scanning calorimetry
Fusion enthalpy
Liquid crystals, polymeric
Polymer blend **compatibilizers**
Viscosity
(morphol. and rheol. of acrylic acid-**functionalized** HDPE-liq.-cryst. polyester blends **compatibilized** by a novel PE-g-LCP copolymer)
- IT Fracture surface morphology
(polymeric; morphol. and rheol. of acrylic acid-**functionalized** HDPE-liq.-cryst. polyester blends **compatibilized** by a novel PE-g-LCP copolymer)
- IT **244047-69-6P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(Escor 5000-SBH 112 graft copolymer; morphol. and rheol. of acrylic acid-**functionalized** HDPE-liq.-cryst. polyester blends **compatibilized** by a novel PE-g-LCP copolymer)
- RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
- (1) Chiou, Y; Polymer 1996, V37, P4099 HCAPLUS
 - (2) Datta, A; Polymer 1993, V34, P759 HCAPLUS
 - (3) Datta, A; Polymer 1995, V36, P505 HCAPLUS
 - (4) Heino, M; J Appl Polym Sci 1993, V48, P1677 HCAPLUS
 - (5) Heino, M; J Appl Polym Sci 1994, V51, P259 HCAPLUS
 - (6) Holsti-Miettinen, R; J Appl Polym Sci 1995, V57, P573 HCAPLUS
 - (7) La Mantia, F; Polym Eng Sci 1997, V37, P1164 HCAPLUS
 - (8) La Mantia, F; Polym Networks Blends 1996, V6, P171 HCAPLUS
 - (9) La Mantia, F; to be published in J Appl Polym Sci
 - (10) Lyatskaya, Y; J Phys Chem 1996, V100, P1449 HCAPLUS
 - (11) Magagnini, P; US 4833229 1989 HCAPLUS
 - (12) Magagnini, P; J Appl Polym Sci 1996, V60, P1665
 - (13) Magagnini, P; to be published in J Appl Polym Sci
 - (14) Miller, M; Polymer 1995, V36, P3107 HCAPLUS
 - (15) Minkova, L; Colloid Polym Sci 1997, V275, P520 HCAPLUS
 - (16) Minkova, L; J Appl Polym Sci 1996, V62, P1613 HCAPLUS
 - (17) Miteva, T; Colloid Polym Sci 1997, V275, P38 HCAPLUS
 - (18) O'Donnel, H; Polymer 1995, V36, P3113
 - (19) Pedretti, U; ChemTec 1993
- IT **244047-69-6P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(Escor 5000-SBH 112 graft copolymer; morphol. and rheol. of acrylic acid-**functionalized** HDPE-liq.-cryst. polyester blends

compatibilized by a novel PE-g-LCP copolymer)

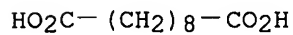
RN 244047-69-6 HCAPLUS

CN Decanedioic acid, polymer with [1,1'-biphenyl]-4,4'-diol, ethene,
4-hydroxybenzoic acid and 2-propenoic acid, graft (9CI) (CA INDEX NAME)

CM 1

CRN 111-20-6

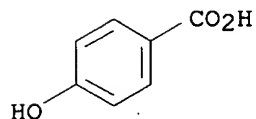
CMF C10 H18 O4



CM 2

CRN 99-96-7

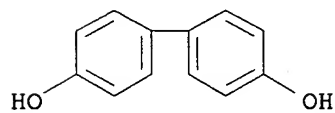
CMF C7 H6 O3



CM 3

CRN 92-88-6

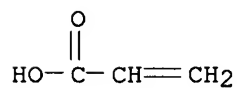
CMF C12 H10 O2



CM 4

CRN 79-10-7

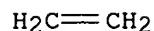
CMF C3 H4 O2



CM 5

CRN 74-85-1

CMF C2 H4



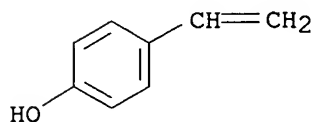
- L44 ANSWER 17 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1998:580797 HCAPLUS
 DN 129:245845
 TI Study on the compatibility of [PPO-PDMS-PHS]_n/PPO blends
 AU Shi, Linqi; Zheng, Guodong; Feng, Zhiliu
 CS Changchun Inst. Applied Chemistry, Chinese Academy of Sciences, Changchun, 130022, Peop. Rep. China
 SO Gaofenzi Cailiao Kexue Yu Gongcheng (1998), 14(4), 65-68
 CODEN: GCKGEI; ISSN: 1000-7555
 PB "Gaofenzi Cailiao Kexue Yu Gongcheng" Bianjibu
 DT Journal
 LA Chinese
 CC 36-6 (Physical Properties of Synthetic High **Polymers**)
 AB The compatibility of [PPO-PDMS-PHS]_n segmented ternary copolymer with homopolymer PPO blends was studied by DSC and DMA. PPO formed miscible blends with the copolymer, even when .hivin.Mn of PPO is as high as that of PPO segment (.hivin.Mn=20000) and much higher than that of PHS (.hivin.Mn=5160). In this case the ratio of the .hivin.Mn of the homopolymer to that of the corresponding segment goes over the limit of that reported in literature for homopolymer/block copolymer blends. The mechanism of this phenomenon needs further investigation.
 ST PPO blend block copolymer PDMS PHS; compatibility polyoxyphenylene blend PPO PDMS copolymer
 IT Glass transition temperature
 Mechanical loss
 Miscibility
 (compatibility, mech. loss, and glass temp. of PPO blends with its block copolymer with PDMS or with PDMS/PHS)
 IT Polymer blends
 Polyoxyphenylenes
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (compatibility, mech. loss, and glass temp. of PPO blends with its block copolymer with PDMS or with PDMS/PHS)
 IT Polysiloxanes, properties
 Polysiloxanes, properties
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (polyoxyphenylene-; compatibility, mech. loss, and glass temp. of PPO blends with its block copolymer with PDMS or with PDMS/PHS)
 IT Polyoxyphenylenes
 Polyoxyphenylenes
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (siloxane-; compatibility, mech. loss, and glass temp. of PPO blends with its block copolymer with PDMS or with PDMS/PHS)
 IT 1066-42-8D, Dimethylsilanediol, block copolymers with PPO and/or poly(p-hydroxystyrene) **2628-17-3D**, p-Hydroxystyrene, block copolymers with PPO and/or PDMS 24938-67-8, Poly[oxy(2,6-dimethyl-1,4-phenylene)] 24938-67-8D, Poly[oxy(2,6-dimethyl-1,4-phenylene)], block copolymers with PDMS and poly(p-hydroxystyrene) 176785-32-3, Dimethylsilanediol-p-hydroxystyrene block copolymer
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (compatibility, mech. loss, and glass temp. of PPO blends with its block copolymer with PDMS or with PDMS/PHS)
 IT **2628-17-3D**, p-Hydroxystyrene, block copolymers with PPO and/or

PDMS

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(**compatibility**, mech. loss, and glass temp. of PPO blends
with its block copolymer with PDMS or with PDMS/PHS)

RN 2628-17-3 HCAPLUS

CN Phenol, 4-ethenyl- (9CI) (CA INDEX NAME)



L44 ANSWER 18 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 1998:342625 HCAPLUS

DN 129:41668

TI Synthesis of PP-LCP graft copolymers and their compatibilizing activity
for PP/LCP blends

AU Magagnini, P. L.; Pracella, M.; Minkova, L. I.; Miteva, Ts.; Sek, D.;
Grobelny, J.; La Mantia, F. P.; Scaffaro, R.

CS Dep. Chemical Eng., Univ. Pisa, Pisa, 56126, Italy

SO Journal of Applied Polymer Science (1998), 69(2), 391-403
CODEN: JAPNAB; ISSN: 0021-8995

PB John Wiley & Sons, Inc.

DT Journal

LA English

CC 37-3 (**Plastics** Manufacture and Processing)

Section cross-reference(s): 75

AB New graft copolymers consisting of polypropylene (PP) backbones and liq.
cryst. polymer (LCP) branches, to be used as **compatibilizing**
agents for PP/LCP blends, were prepd. The PP-g-LCP copolymers were prepd.
by polycondensation of the monomers of a semiflexible liq. cryst.
polyester (SBH 1:1:2), i.e., sebacic acid (S), 4,4'-dihydroxybiphenyl (B),
and 4-hydroxybenzoic acid (H) in the mole ratio of 1:1:2, carried out in
the presence of appropriate amts. of a com. acrylic acid-
functionalized polypropylene (PPAA). The polycondensation
products, referred to as COPP50 and COPP70, having a calcd. PPAA concn. of
50 and 70 wt%, resp., were fractionated with boiling toluene and xylene,
and the sol. and insol. fractions were characterized by fourier transform
IR and NMR spectroscopy, SEM, DSC, and X-ray diffraction. All anal.
characterizations concordantly showed that the products are formed by
intricate mixts. of unreacted PPAA and SBH together with PP-g-SBH
copolymers of different compn. Exploratory expts. carried out by adding
small amts. of COPP50 or COPP70 into binary mixts. of isotactic
polypropylene (iPP) and SBH while blending have demonstrated that this
practice leads to an appreciable improvement of the dispersion of the
minor LCP phase, as well as to an increase of the crystn. rate of iPP.

ST propylene graft copolymer liq crystal polyester; sebacic acid polyester
graft copolymer; dihydroxybiphenyl polyester graft copolymer;
hydroxybenzoic acid polyester graft copolymer; blend isotactic
polypropylene polyester compatibilizer

IT Polymer morphology

(fracture-surface; prepn. of propylene-liq.-cryst. polyester graft
copolymer and their compatibilizing activity for isotactic
polypropylene-polyester blends)

IT Fracture surface morphology

- (polymeric; prepn. of propylene-liq.-cryst. polyester graft copolymer and their compatibilizing activity for isotactic polypropylene-polyester blends)
- IT Crystallization
Fusion enthalpy
Liquid crystals, polymeric
Polymer blend compatibilizers
(prepn. of propylene-liq.-cryst. polyester graft copolymer and their compatibilizing activity for isotactic polypropylene-polyester blends)
- IT Polyesters, properties
RL: MOA (Modifier or additive use); POF (Polymer in formulation); PRP (Properties); USES (Uses)
(prepn. of propylene-liq.-cryst. polyester graft copolymer and their compatibilizing activity for isotactic polypropylene-polyester blends)
- IT Polymer blends
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(prepn. of propylene-liq.-cryst. polyester graft copolymer and their compatibilizing activity for isotactic polypropylene-polyester blends)
- IT 106400-60-6, Polybond 1001
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(prepn. and characterization of acrylic acid-grafted polypropylene-liq.-cryst. polyester blends)
- IT **206544-79-8P**, Acrylic acid-4,4'-dihydroxybiphenyl-4-hydroxybenzoic acid-propylene-sebacic acid graft copolymer
RL: MOA (Modifier or additive use); **SPN (Synthetic preparation); PREP (Preparation); USES (Uses)**
(prepn. of propylene-liq.-cryst. polyester graft copolymer and their **compatibilizing** activity for isotactic polypropylene-polyester blends)
- IT 25085-53-4, Moplen F30S **140236-37-9**, 4,4'-Dihydroxybiphenyl-4-hydroxybenzoic acid-sebacic acid copolymer
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(prepn. of propylene-liq.-cryst. polyester graft copolymer and their **compatibilizing** activity for isotactic polypropylene-polyester blends)

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Chiou, Y; Polymer 1996, V37, P4099 HCAPLUS
- (2) Datta, A; Polymer 1993, V34, P759 HCAPLUS
- (3) Datta, A; Polymer 1995, V36, P505 HCAPLUS
- (4) Datta, A; SPE Tech Pap 1991, V49, P913
- (5) Done, D; SPE Tech Pap 1990, V48, P1857
- (6) Dutta, D; Polym Eng Sci 1990, V30, P1005 HCAPLUS
- (7) Federici, C; EP 0340655 A2 1989 HCAPLUS
- (8) Heino, M; J Appl Polym Sci 1993, V48, P1677 HCAPLUS
- (9) Holsti-Miettinen, R; J Appl Polym Sci 1995, V57, P573 HCAPLUS
- (10) Jin, X; J Macromol Sci, Rev Macromol Chem Phys 1995, VC35, P1 HCAPLUS
- (11) La Mantia, F; Polym Eng Sci 1997, V37, P1164 HCAPLUS
- (12) La Mantia, F; Thermotropic Liquid Crystal Polymer Blends 1993
- (13) La Mantia, F; Trends in Polymer Science 1991, V1, P9
- (14) Lyatskaya, Y; J Phys Chem 1996, V100, P1449 HCAPLUS
- (15) Magagnini, P; US 4833229 1989 HCAPLUS
- (16) Magagnini, P; J Appl Polym Sci 1996, V60, P1665
- (17) Magagnini, P; Recent Advances in Chemical Engineering 1990, P541
- (18) Miller, M; Macromol Rapid Commun 1994, V15, P857 HCAPLUS
- (19) Miller, M; Polymer 1995, V36, P3107 HCAPLUS
- (20) Minkova, L; J Appl Polym Sci 1996, V62, P1613 HCAPLUS
- (21) O'Donnel, H; Polymer 1995, V36, P3113

(22) Pedretti, U; Processing and Properties of Liquid Crystalline Polymers and LCP Based Blends 1993

(23) Poli, G; Polym Eng Sci 1996, V36, P1244

(24) Qin, Y; Liquid Crystalline Polymer Systems, Technological Advances 1996, P98 HCAPLUS

(25) Tjong, S; J Mater Sci 1996, V31, P479 HCAPLUS

(26) Yongcheng, Y; Eur Polym J 1991, V27, P723

IT 206544-79-8P, Acrylic acid-4,4'-dihydroxybiphenyl-4-hydroxybenzoic acid-propylene-sebacic acid graft copolymer

RL: MOA (Modifier or additive use); SPN (Synthetic preparation);

PREP (Preparation); USES (Uses)

(prepn. of propylene-liq.-cryst. polyester graft copolymer and their compatibilizing activity for isotactic polypropylene-polyester blends)

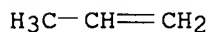
RN 206544-79-8 HCAPLUS

CN Decanedioic acid, polymer with [1,1'-biphenyl]-4,4'-diol, 4-hydroxybenzoic acid, 1-propene and 2-propenoic acid, graft (9CI) (CA INDEX NAME)

CM 1

CRN 115-07-1

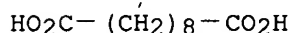
CMF C3 H6



CM 2

CRN 111-20-6

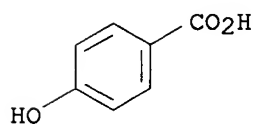
CMF C10 H18 O4



CM 3

CRN 99-96-7

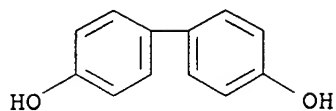
CMF C7 H6 O3



CM 4

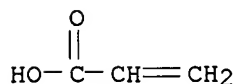
CRN 92-88-6

CMF C12 H10 O2



CM 5

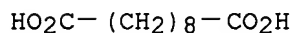
CRN 79-10-7
CMF C3 H4 O2



IT 140236-37-9, 4,4'-Dihydroxybiphenyl-4-hydroxybenzoic acid-sebacic acid copolymer
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (prepn. of propylene-liq.-cryst. polyester graft copolymer and their
 compatibilizing activity for isotactic polypropylene-polyester
 blends)
 RN 140236-37-9 HCAPLUS
 CN Decanedioic acid, polymer with [1,1'-biphenyl]-4,4'-diol and
 4-hydroxybenzoic acid (9CI) (CA INDEX NAME)

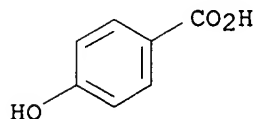
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CRN 111-20-6
CMF C10 H18 O4



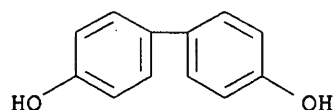
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CRN 99-96-7
CMF C7 H6 O3



CM 3

CRN 92-88-6
CMF C12 H10 O2



L44 ANSWER 19 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 1998:293536 HCAPLUS

DN 129:5013

TI **Functionalized polymers for compatibilizing**
/stabilizing blends of plasticsIN Pfaendner, Rudolf; Herbst, Heinz; Hoffmann, Kurt; Evans, Samuel;
Steinmann, AlfredPA Ciba Specialty Chemicals Holding Inc., Switz.; Pfaendner, Rudolf; Herbst,
Heinz; Hoffmann, Kurt; Evans, Samuel; Steinmann, Alfred

SO PCT Int. Appl., 46 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C08F008-00

ICS C08L101-00; C08K005-00

CC 35-8 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 37, 38

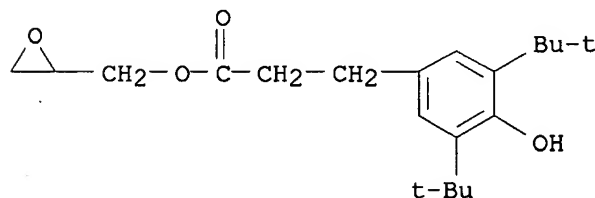
FAN.CNT 1

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PI	WO 9818830	A1	19980507	WO 1997-EP5782	19971020
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	AU 9851879	A1	19980522	AU 1998-51879	19971020
	AU 723065	B2	20000817		
	EP 935619	A1	19990818	EP 1997-946748	19971020
	EP 935619	B1	20010620		
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	CN 1235612	A	19991117	CN 1997-199406	19971020
	JP 2001502748	T2	20010227	JP 1998-520001	19971020
	AT 202366	E	20010715	AT 1997-946748	19971020
	ES 2158594	T3	20010901	ES 1997-946748	19971020
	KR 2000049270	A	20000725	KR 1999-703379	19990417
	US 6362278	B1	20020326	US 1999-284840	19990421
	US 2002123577	A1	20020905	US 2001-37543	20011109
PRAI	EP 1996-810726	A	19961031		
	WO 1997-EP5782	W	19971020		
	US 1999-284840	A3	19990421		
OS	MARPAT 129:5013				
AB	Plastics or plastic compns. are compatibilized by incorporating polymeric compds. prepd. by reaction of a compd. selected from the group of sterically hindered phenols , sterically hindered amines , lactones, sulfides, phosphites, benzotriazoles, benzophenones and 2-(2-hydroxyphenyl)-1,3,5-				

triazines, with a **compatibilizer**. Kraton FG 1901 was heated at 210-230.degree. with 2% addn. of 2,3-epoxypropyl-3,5-bis(1,1-dimethylethyl)-4-hydroxybenzenepropionate to give **functionalized compatibilizer**. A 70/30 blend of LDPE/nylon 6 and 5% above **functionalized compatibilizer** gave impact strength 544 and 428 kJ/m2, initially and after 7725 h at 100.degree., resp.; vs. 292 and 53, resp., without additive **compatibilizer**.

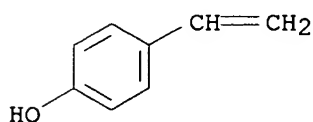
- ST. **functionalized compatibilizer** polyethylene nylon blend; maleated hydrogenated SBR reaction **hindered phenol**; phenol stabilizer reaction polymeric **compatibilizer**; amine stabilizer reaction polymeric **compatibilizer**; lactone stabilizer reaction polymeric **compatibilizer**; sulfide stabilizer reaction polymeric **compatibilizer**; phosphite stabilizer reaction polymeric **compatibilizer**; benzotriazole stabilizer reaction polymeric **compatibilizer**; benzophenone stabilizer reaction polymeric **compatibilizer**; hydroxyphenyltriazine stabilizer reaction polymeric **compatibilizer**
- IT Polyamides, uses
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (Ultramid B 36; **functionalized** polymers for **compatibilizing**/stabilizing blends of plastics)
- IT Polymer blend **compatibilizers**
 (for stability and **compatibilizing** effect;
functionalized polymers for **compatibilizing** /stabilizing blends of plastics)
- IT Impact-resistant materials
 Impact-resistant materials
 (heat-resistant, polyethylene-nylon blend; **functionalized** polymers for **compatibilizing**/stabilizing blends of plastics)
- IT Styrene-butadiene rubber, preparation
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (hydrogenated, block, triblock, maleated, reaction products with stabilizing agents; **functionalized** polymers for **compatibilizing**/stabilizing blends of plastics)
- IT Heat-resistant materials
 Heat-resistant materials
 (impact-resistant, polyethylene-nylon blend; **functionalized** polymers for **compatibilizing**/stabilizing blends of plastics)
- IT Stabilizing agents
 (polymeric; **functionalized** polymers for **compatibilizing**/stabilizing blends of plastics)
- IT 25038-54-4, Nylon 6, uses
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (Ultramid B 36; **functionalized** polymers for **compatibilizing**/stabilizing blends of plastics)
- IT 21275-36-5DP, reaction products with polymeric **compatibilizer** 71882-90-1DP, reaction products with polymeric **compatibilizer** 207410-12-6DP, Lucalen A 3110MX, reaction products with stabilizing agents
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (**functionalized** polymers for **compatibilizing** /stabilizing blends of plastics)
- IT 9002-88-4
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (**functionalized** polymers for **compatibilizing**

/stabilizing blends of plastics)
 IT 9003-55-8P
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (styrene-butadiene rubber, hydrogenated, block, triblock, maleated, reaction products with stabilizing agents; **functionalized** polymers for **compatibilizing**/stabilizing blends of plastics)
 RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
 (1) Ciba; EP 0638597 A 1995 HCAPLUS
 (2) Exxon; WO 9320133 A 1993 HCAPLUS
 (3) Hercules Inc; DE 3517798 A 1986 HCAPLUS
 (4) Kawasaki; EP 0673949 A 1995 HCAPLUS
 (5) Kazmierzak; US 34791 ER 1994 HCAPLUS
 (6) Mercedes-Benz; DE 4230157 C 1993 HCAPLUS
 (7) Pennwalt Corp; EP 0303986 A 1989 HCAPLUS
 IT 21275-36-5DP, reaction products with polymeric **compatibilizer**
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (**functionalized** polymers for **compatibilizing** /stabilizing blends of plastics)
 RN 21275-36-5 HCAPLUS
 CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, oxiranylmethyl ester (9CI) (CA INDEX NAME)



L44 ANSWER 20 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1998:264218 HCAPLUS
 DN 128:271193
 TI Studies on poly(phenylene ether) and polydimethylsiloxane containing copolymer blends
 AU Yao, Zhanhai; Shi, Linqi
 CS Changhan Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, 130022, Peop. Rep. China
 SO Gaofenzi Cailiao Kexue Yu Gongcheng (1998), 14(2), 62-66
 CODEN: GCKGEI; ISSN: 1000-7555
 PB "Gaofenzi Cailiao Kexue Yu Gongcheng" Bianjibu
 DT Journal
 LA Chinese
 CC 37-5 (Plastics Manufacture and Processing)
 AB Morphol. and properties of blends of poly(phenylene ether) (PPO) with poly(p-hydroxystyrene)-polydimethylsiloxane (PHS-PDMS) copolymer, PPO-PHS-PDMS, and polystyrene/PPO-PHS-PDMS have been studied by DSC, DDV and mech. properties detn. PPO/PHS-PDMS blends are completely compatible system, when mol. wt. of PPO and PPO in PPO-PHS-PDMS are equal, PPO/PPO-PHS-PDMS blends and PPO/PS/PPO-PHS-PDMS blends are two compatible system. Young's modular and strength of the blends are improved.

- ST polyphenylene ether polydimethylsiloxane copolymer blend compatibility
 IT Glass transition temperature
 Mechanical properties
 (compatibility of poly(phenylene ether) and polydimethylsiloxane contg. copolymer blends)
- IT Polysiloxanes, properties
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (poly(phenylene oxide) blend; compatibility of poly(phenylene ether) and polydimethylsiloxane contg. copolymer blends)
- IT Polymer blends
 RL: PRP (Properties)
 (poly(phenylene oxide)-polystyrene-polydimethylsiloxane copolymer; compatibility of poly(phenylene ether) and polydimethylsiloxane contg. copolymer blends)
- IT Polyoxyphenylenes
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (polydimethylsiloxane copolymer blend; compatibility of poly(phenylene ether) and polydimethylsiloxane contg. copolymer blends)
- IT Polysiloxanes, properties
 Polysiloxanes, properties
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (polyoxyphenylene-, poly(phenylene oxide) blend; compatibility of poly(phenylene ether) and polydimethylsiloxane contg. copolymer blends)
- IT Polyoxyphenylenes
 Polyoxyphenylenes
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (siloxane-, poly(phenylene oxide) blend; compatibility of poly(phenylene ether) and polydimethylsiloxane contg. copolymer blends)
- IT **2628-17-3D**, p-Hydroxystyrene, block polymers with poly(phenylene oxide) and polydimethylsiloxane 31900-57-9D, Dimethylsilanediol homopolymer, amino-terminated, block polymers with hydroxystyrene and poly(phenylene oxide) 163002-36-6D, Dimethylsilanediol homopolymer, amino-terminated sru, block polymers with hydroxystyrene and poly(phenylene oxide) 205535-75-7
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (poly(phenylene oxide) blend; **compatibility** of poly(phenylene ether) and polydimethylsiloxane contg. copolymer blends)
- IT 9003-53-6, Polystyrene
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (poly(phenylene oxide)-polydimethylsiloxane blend; compatibility of poly(phenylene ether) and polydimethylsiloxane contg. copolymer blends)
- IT **2628-17-3D**, p-Hydroxystyrene, block polymers with poly(phenylene oxide) and polydimethylsiloxane
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (poly(phenylene oxide) blend; **compatibility** of poly(phenylene ether) and polydimethylsiloxane contg. copolymer blends)
- RN 2628-17-3 HCAPLUS
 CN Phenol, 4-ethenyl- (9CI) (CA INDEX NAME)

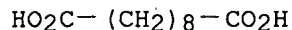


AN 1998:248822 HCAPLUS
 DN 128:271215
 TI Investigations of graft copolymer compatibilizers for blends of polyethylene and liquid-crystalline polyester: 2. NMR study
 AU Grobelny, J.; Sek, D.
 CS Inst. of Polymer Chemistry, Polish Academy of Sciences, Zabrze, 41-800, Pol.
 SO Polymer (1998), 39(11), 2143-2147
 CODEN: POLMAG; ISSN: 0032-3861
 PB Elsevier Science Ltd.
 DT Journal
 LA English
 CC 37-6 (Plastics Manufacture and Processing)
 AB Graft copolymers of functionalized polyethylene having free carboxylic groups (PEox) and liq.-cryst. polyester SBH (derived from sebacic acid, 4,4'-dihydroxybiphenyl and 4-hydroxybenzoic acid) prepd. under various conditions were investigated by means of high-resoln. solid-state ¹³C NMR spectroscopy. Fractionation products of the graft copolymers and a mixt. of PEox with SBH were also studied.
 ST carboxylated polyethylene graft copolymer compatibilizer; liq. cryst polyester polyethylene compatibilizer
 IT Polymer blend compatibilizers
 (graft copolymer compatibilizers for polyethylene/liq.-cryst. polyester blends characterized by NMR)
 IT Polymer blends
 RL: PRP (Properties)
 (graft copolymer compatibilizers for polyethylene/liq.-cryst. polyester blends characterized by NMR)
 IT Liquid crystals, polymeric
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (polyesters; graft copolymer compatibilizers for polyethylene/liq.-cryst. polyester blends characterized by NMR)
 IT 178314-36-8
 RL: MOA (Modifier or additive use); USES (Uses)
 (compatibilizer; graft copolymer compatibilizers for polyethylene/liq.-cryst. polyester blends characterized by NMR)
 IT 9002-88-4D, Polyethylene, carboxylated, esterification products with dihydroxybiphenyl-hydroxybenzoic acid-sebacic acid copolymer
140236-37-9D, 4,4'-Dihydroxybiphenyl-4-hydroxybenzoic acid-sebacic acid copolymer, esterification products with carboxylated polyethylene
 RL: MOA (Modifier or additive use); USES (Uses)
 (graft copolymer **compatibilizers** for polyethylene/liq.-cryst. polyester blends characterized by NMR)
 IT 9002-88-4, Polyethylene 140236-37-9, Sebacic acid-4,4'-dihydroxybiphenyl-4-hydroxybenzoic acid copolymer
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (graft copolymer compatibilizers for polyethylene/liq.-cryst. polyester blends characterized by NMR)
 RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
 (1) Brown, H; Nature 1989, V341, P221 HCAPLUS
 (2) Fayt, R; Makromol Chem 1986, V184, P837
 (3) Jong, L; Macromolécules 1990, V23, P5071 HCAPLUS
 (4) La Mantia, F; Thermotropic Liquid Crystal Polymer Blends 1993
 (5) Lai, Y; J Appl Polym Sci 1994, V54, P1289 HCAPLUS
 (6) Linder, M; J Chem Phys 1985, V82, P1585 HCAPLUS
 (7) Magagnini, P; J Appl Polym Sci 1996, V60, P1665
 (8) Minkova, L; J Appl Polym Sci 1996, V62, P1613 HCAPLUS

- (9) Noolandi, J; Macromolecules 1984, V17, P1531 HCAPLUS
 (10) Sek, D; Polymer 1997, V38, P2925 HCAPLUS
 (11) Sullivan, M; Anal Chem 1982, V54, P1615 HCAPLUS
 IT 140236-37-9D, 4,4'-Dihydroxybiphenyl-4-hydroxybenzoic acid-sebacic acid copolymer, esterification products with carboxylated polyethylene
 RL: MOA (Modifier or additive use); USES (Uses)
 (graft copolymer **compatibilizers** for polyethylene/liq.-cryst. polyester blends characterized by NMR)
 RN 140236-37-9 HCAPLUS
 CN Decanedioic acid, polymer with [1,1'-biphenyl]-4,4'-diol and 4-hydroxybenzoic acid (9CI) (CA INDEX NAME)

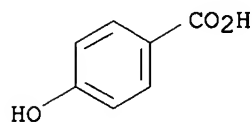
CM 1

CRN 111-20-6
 CMF C10 H18 O4



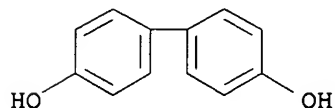
CM 2

CRN 99-96-7
 CMF C7 H6 O3



CM 3

CRN 92-88-6
 CMF C12 H10 O2



- L44 ANSWER 22 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1998:147534 HCAPLUS
 DN 128:230952
 TI Compatibilization of polysulfone/polyamide blends by reactive polysulfones. Evidence for copolymer formation
 AU Weber, M.; Heckmann, W.
 CS Polymers Research Laboratory, BASF A.-G., Ludwigshafen, D-67056, Germany
 SO Polymer Bulletin (Berlin) (1998), 40(2-3), 227-234
 CODEN: POBUDR; ISSN: 0170-0839
 PB Springer-Verlag

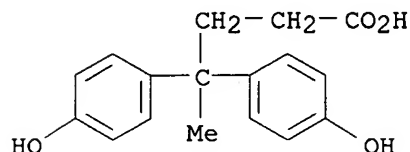
- DT Journal
 LA English
 CC 36-5 (Physical Properties of Synthetic High Polymers)
 AB In order to **compatibilize** polysulfone/polyamide blends by reactive blending melt blending studies using polysulfones with different **functional** groups (carboxyl-, anhydride) and polyamide were performed in a batch-type mixer. The obtained materials were investigated by solvent extn. and transmission electron microscopy. Model expts. reveal the possibility to **compatibilize** polysulfone/polyamide blends by reactive blending techniques using **functionalized** polysulfones. Extn. studies as well as the morphologies of the prepd. samples give evidence for a copolymer formation during the melt blending expts.
- ST polysulfone polyamide compatibilization reactive blending; bisphenol dichlorodiphenylsulfone polymer reactive blending polyamide
- IT Polymer morphology
 (compatibilization of polysulfone/polyamide blends by reactive polysulfones)
- IT Polyamides, properties
 RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (compatibilization of polysulfone/polyamide blends by reactive polysulfones)
- IT Polysulfones, properties
 Polysulfones, properties
 RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (polyether-, polysulfone/polyamide; compatibilization of polysulfone/polyamide blends by reactive polysulfones)
- IT Polyethers, properties
 Polyethers, properties
 RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (polysulfone-, polysulfone/polyamide; compatibilization of polysulfone/polyamide blends by reactive polysulfones)
- IT Polymer blends
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (polysulfone/polyamide; compatibilization of polysulfone/polyamide blends by reactive polysulfones)
- IT 25086-53-7, Caprolactam-hexamethylene diamine-terephthalic acid copolymer
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (compatibilization of polysulfone/polyamide blends by reactive polysulfones)
- IT 25135-51-7DP, Bisphenol A-4,4'-dichlorodiphenylsulfone copolymer, sru, maleic anhydride group-contg. 25135-51-7P 25154-01-2DP, Bisphenol A-4,4'-dichlorodiphenylsulfone copolymer, maleic anhydride group-contg. or phthalic anhydride-terminated 25154-01-2P, Bisphenol A-4,4'-dichlorodiphenylsulfone copolymer **41254-41-5P** 204505-92-0P
 RL: POF (Polymer in formulation); PRP (Properties); **SPN (Synthetic preparation); PREP (Preparation); USES (Uses)**
 (**compatibilization** of polysulfone/polyamide blends by reactive polysulfones)
- IT **41254-41-5P**
 RL: POF (Polymer in formulation); PRP (Properties); **SPN (Synthetic preparation); PREP (Preparation); USES (Uses)**
 (**compatibilization** of polysulfone/polyamide blends by reactive polysulfones)

RN 41254-41-5 HCAPLUS
CN Benzenebutanoic acid, 4-hydroxy-.gamma.-(4-hydroxyphenyl)-.gamma.-methyl-,
polymer with 4,4'-(1-methylethylidene)bis[phenol] and 1,1'-sulfonylbis[4-
chlorobenzene] (9CI) (CA INDEX NAME)

CM 1

CRN 126-00-1

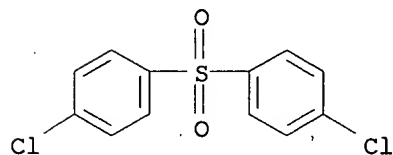
CMF C17 H18 O4



CM 2

CRN 80-07-9

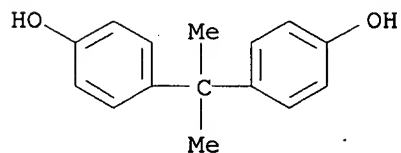
CMF C12 H8 Cl2 O2 S



CM 3

CRN 80-05-7

CMF C15 H16 O2



L44 ANSWER 23 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 1998:6724 HCAPLUS

DN 128:102481

TI Antioxidative properties of polymeric **sterically hindered phenols** based on N-vinylpyrrolidone copolymers

AU Domnina, N. S.; Komarova, E. A.; Arefev, D. V.; Nazarova, O. V.;
Kochetkova, I. S.

CS Dep. Chem., St. Petersburg State Univ. (Petrodvorets Branch),
Petrodvorets, 198904, Russia

SO Vysokomolekulyarnye Soedineniya, Seriya A i Seriya B (1997), 39(10),

1573-1577

CODEN: VSSBEE; ISSN: 1023-3091

PB MAIK Nauka

DT Journal

LA Russian

CC 35-8 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 1, 38, 63

AB The antioxidative activity and the activity with respect to a diphenylpicrylhydrazyl radical of water-sol. polymeric derivs. of **sterically hindered phenols** based on the functional copolymers of N-vinylpyrrolidone were studied. It was shown that the rate of the reaction between the free radicals and the given polymeric deriv. is detd. by the type of polymer-phenol bond and the nature of the reaction medium. It was found th the mol. wts. of the studied polymers and the content of phenol in these polymers insignificantly affect the rate of the radical reaction. The study is of interest with respect to prepn. of physiol. active polymeric antioxidants.

ST polymer bound phenolic antioxidant effectiveness

IT Antioxidants

(antioxidative properties of polymeric **sterically hindered phenols** based on N-vinylpyrrolidone copolymers)

IT 1620-98-ODP, reaction products with vinylpyrrolidone copolymers
 19510-14-6DP, reaction products with vinylpyrrolidone copolymers
 25133-86-2DP, Crotonic acid-N-vinylpyrrolidone copolymer, reaction products with **hindered phenols** 27939-95-3DP,
 Acrolein-N-vinylpyrrolidone copolymer, reaction products with **hindered phenols** 28158-56-7DP, Vinylamine-N-vinylpyrrolidone copolymer, reaction products with **hindered phenols** 32687-77-7DP, reaction products with vinylpyrrolidone copolymers **86860-74-4DP**, reaction products with vinylpyrrolidone copolymers

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

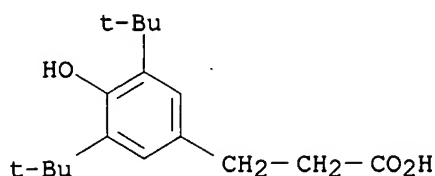
(antioxidative properties of polymeric **sterically hindered phenols** based on N-vinylpyrrolidone copolymers)

IT **86860-74-4DP**, reaction products with vinylpyrrolidone copolymers
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(antioxidative properties of polymeric **sterically hindered phenols** based on N-vinylpyrrolidone copolymers)

RN 86860-74-4 HCAPLUS

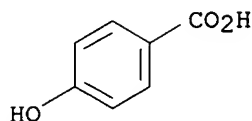
CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, monopotassium salt (9CI) (CA INDEX NAME)



Ⓢ K

- L44 ANSWER 24 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1997:777538 HCAPLUS
 DN 128:48886
 TI Effect of multiblock copolymers in polymer blends
 AU Haussler, Liane; Pospiech, Doris; Eckstein, Kathrin; Janke, Andreas; Vogel, Roland
 CS Institute of Polymer Research Dresden, Dresden, 01069, Germany
 SO Journal of Applied Polymer Science (1997), 66(12), 2293-2309
 CODEN: JAPNAB; ISSN: 0021-8995
 PB John Wiley & Sons, Inc.
 DT Journal
 LA English
 CC 37-5 (Plastics Manufacture and Processing)
 Section cross-reference(s): 36, 75
 AB The use of multiblock copolymers for the compatibilization of immiscible polymer blends is controversially discussed in the literature. Investigations were carried out to est. the effect of multiblock copolymers contg. segments of a liq. cryst. polyester (LCP) and polysulfone (PSU) segments in blends of the based homopolymers. One goal was to det. whether multiblock copolymers provide an opportunity for compatibilizing PSU/LCP blends. By using PSU/LCP multiblock copolymers with different mol. wts. of the blocks in the appropriate binary, soln.-casted blends, it was shown that the interpenetration of the polysulfone phase of the block copolymer and the PSU matrix leads to an improved miscibility of the blend. This effect is retained in ternary blends of PSU, LCP, and the multiblock copolymer, assuming a certain crit. mol. wt. of the multiblock copolymer segments. In addn., some mech. characteristics of PSU/LCP melt blends such as the E-modulus and fracture strength are improved by adding long-segmented multiblock copolymers.
 ST multiblock copolymer compatibilizer polyester polysulfone blend; miscibility enhancement polymer blend multiblock copolymer; liq cryst polyester polysulfone blend miscibility; mech property multiblock copolymer compatibilized blend
 IT Polysulfones, properties
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (liq.-cryst. polyester blends; multiblock copolymer compatibilizer for liq.-cryst. polyester-polysulfone blends in relation to miscibility and mech. properties)
 IT Polymer blends
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
 (liq.-cryst. polyester-polysulfone; multiblock copolymer compatibilizer for liq.-cryst. polyester-polysulfone blends in relation to miscibility and mech. properties)

- IT Crystallization enthalpy
- Expansion
- Fracture toughness
- Glass transition temperature
- Miscibility
- Polymer morphology
- Tensile strength
 - (multiblock copolymer compatibilizer for liq.-cryst.
 - polyester-polysulfone blends in relation to miscibility and mech.
 - properties)
- IT Polymer blend compatibilizers
 - (multiblock polyester-polysulfone; multiblock copolymer compatibilizer
 - for liq.-cryst. polyester-polysulfone blends in relation to miscibility
 - and mech. properties)
- IT Polysulfones, properties
- Polysulfones, properties
- RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
 - (polyester-, block, blend compatibilizer; multiblock copolymer
 - compatibilizer for liq.-cryst. polyester-polysulfone blends in relation
 - to miscibility and mech. properties)
- IT Liquid crystals, polymeric
- RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 - (polyesters, polysulfone blends; multiblock copolymer compatibilizer
 - for liq.-cryst. polyester-polysulfone blends in relation to miscibility
 - and mech. properties)
- IT Polyesters, properties
- Polyesters, properties
- RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
 - (polysulfone-, block, blend compatibilizer; multiblock copolymer
 - compatibilizer for liq.-cryst. polyester-polysulfone blends in relation
 - to miscibility and mech. properties)
- IT 81843-52-9, Vectra A 750
- RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 - (Vectra A 750, polysulfone blends; multiblock copolymer compatibilizer
 - for liq.-cryst. polyester-polysulfone blends in relation to miscibility
 - and mech. properties)
- IT **99-96-7D**, 4-Hydroxybenzoic acid, block polyester-polysulfone
- 100-21-0D, Terephthalic acid, block polyester-polysulfone 107-21-1D,
- Ethylene glycol, block polyester-polysulfone
- RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
 - (blend **compatibilizer**; multiblock copolymer
 - compatibilizer** for liq.-cryst. polyester-polysulfone blends in
 - relation to miscibility and mech. properties)
- IT 25822-54-2, Ethylene glycol-4-hydroxybenzoic acid-terephthalic acid
- copolymer
- RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 - (liq.-cryst.; multiblock copolymer compatibilizer for liq.-cryst.
 - polyester-polysulfone blends in relation to miscibility and mech.
 - properties)
- IT **99-96-7D**, 4-Hydroxybenzoic acid, block polyester-polysulfone
- RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
 - (blend **compatibilizer**; multiblock copolymer
 - compatibilizer** for liq.-cryst. polyester-polysulfone blends in
 - relation to miscibility and mech. properties)
- RN 99-96-7 HCAPLUS
- CN Benzoic acid, 4-hydroxy- (9CI) (CA INDEX NAME)



- L44 ANSWER 25 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1997:481269 HCAPLUS
 DN 127:122243
 TI Compatibility and surface composition of [PSF-PDMS-PHS]_n/PSF blends
 AU Shi, Linqi; Xu, Guanfan; Zheng, Guodong; Feng, Zhiliu
 CS Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, 130022, Peop. Rep. China
 SO Yingyong Huaxue (1997), 14(3), 45-48
 CODEN: YIHUED; ISSN: 1000-0518
 PB Yingyong Huaxue Bianji Weiyuanhui
 DT Journal
 LA Chinese
 CC 36-6 (Physical Properties of Synthetic High Polymers)
 Section cross-reference(s): 37
 AB The relationship between the compatibility in bulk and surface enrichment of PDMS has been studied with a series of [PSF-PDMS-PHS]_n/PSF blends, [PSF = polysulfone, PDMS = polydimethylsiloxane, PHS = poly-p-hydroxystyrene] using DSC, DMA and TEM and XPS. The level of surface enrichment of PDMS was affected by the compatibility between the homopolymer PSF and the hard phase of [PSF-PDMS-PHS]_n. PDMS surface enrichment in the blends was similar to that in the corresponding ternary segmented copolymer [PSF-PDMS-PHS]_n, when the homopolymer PSF and the hard phase of [PSF-PDMS-PHS]_n were miscible. XPS results on the immiscible blends of [PSF-PDMS-PHS]_n/PSF indicated a higher surface enrichment of PDMS, and the latter increased rapidly when the bulk siloxane concn. increased from 1% to 5%.
 ST bisphenol A polysulfone block copolymer; polysulfone blend block copolymer glass temp; morphol polysulfone blend polysiloxane block; mech loss polysulfone blend polysiloxane block; PDMS polysulfone polyhydroxystyrene block copolymer blend
 IT Glass transition temperature
 Mechanical loss
 Miscibility
 Polymer morphology
 (glass temp., morphol., mech. loss, compatibility and surface compn. of bisphenol A polysulfone-PDMS-polyhydroxystyrene block copolymer blends with polysulfone)
 IT Polymer blends
 Polysulfones, properties
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (glass temp., morphol., mech. loss, compatibility and surface compn. of bisphenol A polysulfone-PDMS-polyhydroxystyrene block copolymer blends with polysulfone)
 IT Polysiloxanes, properties
 Polysiloxanes, properties
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (polysulfone-; glass temp., morphol., mech. loss, compatibility and surface compn. of bisphenol A polysulfone-PDMS-polyhydroxystyrene block copolymer blends with polysulfone)
 IT Polysulfones, properties
 Polysulfones, properties

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (siloxane-; glass temp., morphol., mech. loss, compatibility and
 surface compn. of bisphenol A polysulfone-PDMS-polyhydroxystyrene block
 copolymer blends with polysulfone)

IT 80-05-7D, Bisphenol A, polysulfone, block copolymer with PDMS and
 polyhydroxystyrene 1066-42-8D, Dimethylsilanediol, block copolymer with
 bisphenol A polysulfone and polyhydroxystyrene **2628-17-3D**,
 p-Hydroxystyrene, block copolymer with bisphenol A polysulfone and PDMS

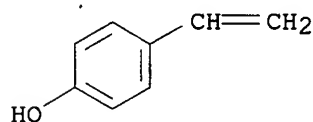
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (glass temp., morphol., mech. loss, **compatibility** and surface
 compn. of bisphenol A polysulfone-PDMS-polyhydroxystyrene block
 copolymer blends with polysulfone)

IT **2628-17-3D**, p-Hydroxystyrene, block copolymer with bisphenol A
 polysulfone and PDMS

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (glass temp., morphol., mech. loss, **compatibility** and surface
 compn. of bisphenol A polysulfone-PDMS-polyhydroxystyrene block
 copolymer blends with polysulfone)

RN 2628-17-3 HCAPLUS

CN Phenol, 4-ethenyl- (9CI) (CA INDEX NAME)



L44 ANSWER 26 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 1997:435842 HCAPLUS

DN 127:51825

TI Method for extrusion of UV-resistant materials and articles manufactured
 by the method

IN Schrock, Nancy J.; Kark, Richard O.; Marchant, Malory R.

PA Dow Chemical Co., USA

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC B29C047-00; B32B027-18; C07D249-18; C08J007-00

CC 38-2 (**Plastics** Fabrication and Uses)

Section cross-reference(s): **37**

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09109223	A2	19970428	JP 1996-228607	19960829
PRAI	US 1995-2897P	P	19950829		

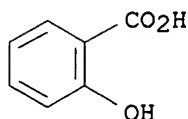
AB The method comprises extrusion of polymers at a temp. higher than the m.p.
 of the polymers; and contacting the resulting extrudates with a
 substantially solventless UV-resistant substance when the temp. is still
 higher than the softening point of the extrudates. Thus, manuf. of
 polycarbonate moldings contg. UV stabilizers (Tinuvin 571) was
 exemplified.

ST UV stabilizer thermoplastic extrusion; polycarbonate extrusion VU
 stabilizer

IT Polyamides, uses

RL: PEP (Physical, engineering or chemical process); TEM (Technical or

- engineered material use); PROC (Process); USES (Uses)
(acrylic; method for extrusion of thermoplastics and UV-resistant articles)
- IT Amines, uses
 Phenols, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (hindered, UV stabilizer; method for extrusion of thermoplastics and UV-resistant articles)
- IT Extrusion of plastics and rubbers
 UV stabilizers
 (method for extrusion of thermoplastics and UV-resistant articles)
- IT Acrylic polymers, uses
 Polyamides, uses
 Polycarbonates, uses
 Polyesters, uses
 Polyolefins
 Polyoxyphenylenes
 Polythiophenylenes
 Polyurethanes, uses
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (method for extrusion of thermoplastics and UV-resistant articles)
- IT Plastics, uses
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (thermoplastics; method for extrusion of thermoplastics and UV-resistant articles)
- IT 65-85-0D, Benzoic acid, esters, uses **69-72-7D**, Salicylic acid, derivs. 101-05-3D, Triazine, derivs. 3724-65-0D, Crotonic acid, derivs.
 RL: MOA (Modifier or additive use); USES (Uses)
 (UV stabilizer; method for extrusion of thermoplastics and UV-resistant articles)
- IT 79-10-7D, 2-Propenoic acid, derivs., uses 95-14-7D, 1H-Benzotriazole, derivs. 119-61-9D, Benzophenone, derivs. 141-82-2D, Malonic acid, esters 23328-53-2, Tinuvin 571
 RL: MOA (Modifier or additive use); USES (Uses)
 (method for extrusion of thermoplastics and UV-resistant articles)
- IT 9002-86-2, PVC 9003-53-6, Polystyrene 9003-55-8, Butadiene-styrene copolymer 25014-41-9, Polyacrylonitrile
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (method for extrusion of thermoplastics and UV-resistant articles)
- IT **69-72-7D**, Salicylic acid, derivs.
 RL: MOA (Modifier or additive use); USES (Uses)
 (UV stabilizer; method for extrusion of thermoplastics and UV-resistant articles)
- RN 69-72-7 HCAPLUS
CN Benzoic acid, 2-hydroxy- (9CI) (CA INDEX NAME)



L44 ANSWER 27 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 1997:378281 HCAPLUS

DN 127:82105

TI Investigations of graft copolymer compatibilizers for blends of polyethylene and liquid crystalline polyester: 1. FTIR study

AU Sek, Danuta; Kaczmarczyk, Bozena

CS Institute of Polymer Chemistry, Polish Academy of Sciences, Zabrze, 41-800, Pol.

SO Polymer (1997), 38(12), 2925-2931

CODEN: POLMAG; ISSN: 0032-3861

PB Elsevier

DT Journal

LA English

CC 37-5 (Plastics Manufacture and Processing)

Section cross-reference(s): 36

AB Graft copolymers of functionalized polyethylene having free carboxylic groups (PEox) and liq. cryst. polyester SBH derived from sebacic acid, 4,4'-dihydroxybiphenyl and 4-hydroxybenzoic acid, prep'd. in various conditions, as well as fractionation products of the graft copolymers, were investigated by IR spectroscopy. The grafting has been followed by changes in the amt. of carboxylic and aliph.-arom. ester groups.

ST polyethylene liq. cryst. polyester blend compatibilizer; carboxylated polyethylene grafting polyester compatibilizer

IT IR spectra

Liquid crystals, polymeric

Polymer blend compatibilizers

(FTIR study of carboxylated polyethylene graft copolymer

compatibilizers for blends of polyethylene and liq. cryst. polyester)

IT Polyesters, properties

RL: MOA (Modifier or additive use); POF (Polymer in formulation); PRP (Properties); USES (Uses)

(FTIR study of carboxylated polyethylene graft copolymer

compatibilizers for blends of polyethylene and liq. cryst. polyester)

IT Polymer blends

RL: MSC (Miscellaneous)

(FTIR study of carboxylated polyethylene graft copolymer

compatibilizers for blends of polyethylene and liq. cryst. polyester)

IT 9002-88-4D, Polyethylene, carboxylated, esterification products with dihydroxybiphenyl-hydroxybenzoic acid-sebacic acid copolymer

140236-37-9D, 4,4'-Dihydroxybiphenyl-4-hydroxybenzoic acid-sebacic acid copolymer, esterification products with carboxylated polyethylene

RL: PRP (Properties)

(FTIR study of carboxylated polyethylene graft copolymer

compatibilizers for blends of polyethylene and liq. cryst. polyester)

IT 140236-37-9, 4,4'-Dihydroxybiphenyl-4-hydroxybenzoic acid-sebacic acid copolymer

RL: MSC (Miscellaneous); POF (Polymer in formulation); USES (Uses)

(carboxylated polyethylene blend; FTIR study of carboxylated polyethylene graft copolymer compatibilizers for blends of polyethylene and liq. cryst. polyester)

IT 9002-88-4, Polyethylene

RL: MSC (Miscellaneous); POF (Polymer in formulation); USES (Uses)

(liq. cryst. polyester blend; FTIR study of carboxylated polyethylene graft copolymer compatibilizers for blends of polyethylene and liq. cryst. polyester)

IT 178314-36-8, 4,4'-Dihydroxybiphenyl-ethylene-4-hydroxybenzoic acid-sebacic acid graft copolymer

RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)

(liq. cryst.; FTIR study of **functionalized**
polyethylene-polyester graft copolymer **compatibilizers** for
blends of polyethylene and liq. cryst. polyester)

IT **140236-37-9D**, 4,4'-Dihydroxybiphenyl-4-hydroxybenzoic acid-sebacic
acid copolymer, esterification products with carboxylated polyethylene

RL: PRP (Properties)

(FTIR study of carboxylated polyethylene graft copolymer
compatibilizers for blends of polyethylene and liq. cryst.
polyester)

RN 140236-37-9 HCAPLUS

CN Decanedioic acid, polymer with [1,1'-biphenyl]-4,4'-diol and
4-hydroxybenzoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 111-20-6

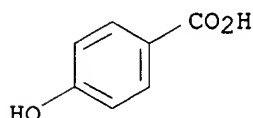
CMF C10 H18 O4

HO₂C-(CH₂)₈-CO₂H

CM 2

CRN 99-96-7

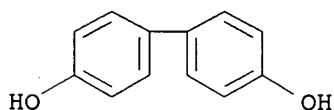
CMF C7 H6 O3



CM 3

CRN 92-88-6

CMF C12 H10 O2



IT **140236-37-9**, 4,4'-Dihydroxybiphenyl-4-hydroxybenzoic acid-sebacic
acid copolymer

RL: MSC (Miscellaneous); POF (Polymer in formulation); USES (Uses)

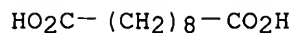
(carboxylated polyethylene blend; FTIR study of carboxylated
polyethylene graft copolymer compatibilizers for blends of polyethylene
and liq. cryst. polyester)

RN 140236-37-9 HCAPLUS

CN Decanedioic acid, polymer with [1,1'-biphenyl]-4,4'-diol and
4-hydroxybenzoic acid (9CI) (CA INDEX NAME)

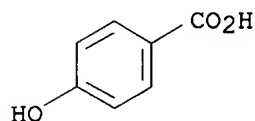
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CRN 111-20-6
CMF C10 H18 O4



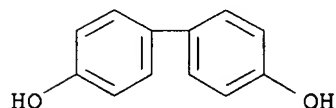
CM 2

CRN 99-96-7
CMF C7 H6 O3



CM 3

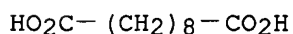
CRN 92-88-6
CMF C12 H10 O2



IT **178314-36-8**, 4,4'-Dihydroxybiphenyl-ethylene-4-hydroxybenzoic acid-sebacic acid graft copolymer
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
 (liq. cryst.; FTIR study of **functionalized**
 polyethylene-polyester graft copolymer **compatibilizers** for
 blends of polyethylene and liq. cryst. polyester)
 RN 178314-36-8 HCAPLUS
 CN Decanedioic acid, polymer with [1,1'-biphenyl]-4,4'-diol, ethene and
 4-hydroxybenzoic acid, graft (9CI) (CA INDEX NAME)

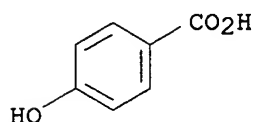
CM 1

CRN 111-20-6
CMF C10 H18 O4



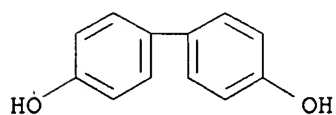
CM 2

CRN 99-96-7
CMF C7 H6 O3



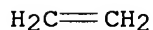
CM 3

CRN 92-88-6
CMF C12 H10 O2



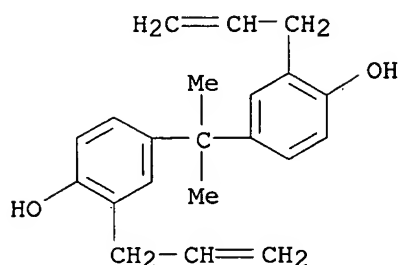
CM 4

CRN 74-85-1
CMF C2 H4



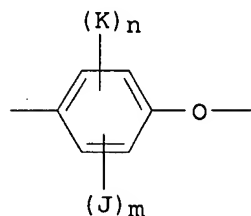
L44 ANSWER 28 OF 57 HCAPLUS COPYRIGHT 2003 ACS
AN 1996:711038 HCAPLUS
DN 126:19694
TI Compatibilized, segmented liquid rubbers as epoxy-toughening agents
AU Muelhaupt, R.; Buchholz, U.
CS Freiburger Materialforschungszentrum Inst. Makromol. Chem., Albert-Ludwigs Univ., Freiburg, D-79104, Germany
SO Advances in Chemistry Series (1996), 252 (Toughened Plastics II), 75-94
CODEN: ADCSAJ; ISSN: 0065-2393
PB American Chemical Society
DT Journal
LA English
CC 37-5 (Plastics Manufacture and Processing)
Section cross-reference(s): 39
AB Novel hybrid composites and advanced structural materials, such as structural adhesives and fiber-metal laminates that are resistant to high-velocity impact, are based on epoxy resins toughened with compatibilized, segmented, reactive liq. rubbers. Upon cure, interpenetrating networks contg. dispersed rubber micro- and nanoparticles are formed. Morphol. and mech. properties are controlled by liq.-rubber mol. architectures, esp. by the balance of segments that are either compatible or incompatible with the epoxy matrix. Novel poly(.epsilon.-caprolactone)-block-poly(dimethylsiloxane)-block-poly(.epsilon.-caprolactone) liq. rubbers improve the toughness of

- silica-filled epoxy resins without sacrificing stiffness. Blends of compatibilized liq. rubbers, such as bisphenol-terminated segmented polyetherurethanes with epoxy-terminated nitrile rubber, possess rubber-blend microphases that account for unusual property synergisms, namely, substantially improved static and high-velocity impact resistance, high T-peel strength combined with high lap shear strength, excellent adhesion, and improved fatigue resistance.
- ST siloxane polyester toughener epoxy resin; polyether polyurethane toughened epoxy resin
- IT Synthetic rubber, properties
 RL: MOA (Modifier or additive use); NUU (Other use, unclassified); PRP (Properties); USES (Uses)
 (acrylic acid-acrylonitrile-butadiene, carboxy-terminated; compatibilized segmented liq. rubbers as epoxy-toughening agents)
- IT Adhesion, physical
 Impact-resistant materials
 Polymer morphology
 (compatibilized segmented liq. rubbers as epoxy-toughening agents)
- IT Epoxy resins, properties
 RL: PRP (Properties)
 (compatibilized segmented liq. rubbers as epoxy-toughening agents)
- IT Polysiloxanes, properties
 Polysiloxanes, properties
 RL: MOA (Modifier or additive use); NUU (Other use, unclassified); PRP (Properties); USES (Uses)
 (polyester-, block; compatibilized segmented liq. rubbers as epoxy-toughening agents)
- IT Polyurethanes, properties
 RL: MOA (Modifier or additive use); NUU (Other use, unclassified); PRP (Properties); USES (Uses)
 (polyether-; compatibilized segmented liq. rubbers as epoxy-toughening agents)
- IT Polyesters, properties
 Polyesters, properties
 RL: MOA (Modifier or additive use); NUU (Other use, unclassified); PRP (Properties); USES (Uses)
 (polysiloxane-, block; compatibilized segmented liq. rubbers as epoxy-toughening agents)
- IT 1745-89-7D, reaction products with hexamethylenediisocyanate-polypropylene oxide copolymer 30943-88-5D, diallyl bisphenol A-terminated 34739-20-3D, diallyl bisphenol A-terminated 159000-14-3
 RL: MOA (Modifier or additive use); NUU (Other use, unclassified); PRP (Properties); USES (Uses)
 (compatibilized segmented liq. rubbers as epoxy-toughening agents)
- IT 25068-38-6
 RL: PRP (Properties)
 (compatibilized segmented liq. rubbers as epoxy-toughening agents)
- IT 1745-89-7D, reaction products with hexamethylenediisocyanate-polypropylene oxide copolymer
 RL: MOA (Modifier or additive use); NUU (Other use, unclassified); PRP (Properties); USES (Uses)
 (compatibilized segmented liq. rubbers as epoxy-toughening agents)
- RN 1745-89-7 HCAPLUS
- CN Phenol, 4,4'-(1-methylethylidene)bis[2-(2-propenyl)- (9CI) (CA INDEX NAME)

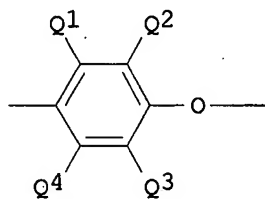


L44 ANSWER 29 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1995:316387 HCAPLUS
 DN 122:292411
 TI Thermoplastic poly(phenylene ether)-poly(phenylene sulfide) compositions with improved compatibility
 IN Tanaka, Tomohiko; Oomura, Haruo; Tsukahara, Tooru
 PA Mitsubishi Petrochemical Co, Japan
 SO Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08L071-12
 ICS C08L081-02
 CC 37-6 (Plastics Manufacture and Processing)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06287434	A2	19941011	JP 1993-73150	19930331
PRAI	JP 1993-73150		19930331		
GI					



I



II

AB The compns. with good mech. strength and rigidity comprise (A) 10-90% poly(hydroxyphenylene ethers) with no.-av. d.p. 25-400 composed of oxyphenylene units I [$m = 1-4$; $n = 0-3$; $m + n$.ltoreq. 4; $J = R1(OH)a$, $R2SR1(OH)a$; $a = 1-6$; $R1 = (O$ -interrupted or substituted) C2-20 aliph. polyvalent hydrocarbon; $R2 = C2-20$ alkylene; $K = \text{halo, C1-20 primary or secondary alkyl, C3-20 alkenyl, C1-20 haloalkyl, C1-20 hydrocarboxy}$] and II [$Q1-4 = H, \text{halo, C1-20 primary or secondary alkyl, C3-20 alkenyl, Ph, C1-20 aminoalkyl, C1-20 haloalkyl, C1-20 hydrocarboxy}$], with 0.2 .ltoreq. 100p/(p + q) .ltoreq. 100 (p = no. of I; q = no. of II) and (B) 10-90% functionalized poly(phenylene sulfides) reactive with the alc. OH of the poly(hydroxyphenylene ethers). Thus, 100 parts Tohpren T 7 [poly(phenylene sulfide)] and 3 parts thiomalic acid were treated at

330.degree. to give a carboxy-contg. poly(phenylene sulfide) (III). Sep., treating 42.7 parts 2-allyl-6-methylphenoxytrimethylsilane with borane at 20.degree. in THF, adding H₂O, NaOH, and H₂O₂ in the resulting soln., and further treating at 50.degree. for 1 h gave 38% 2-(3-hydroxypropyl)-6-methylphenol, 27 parts of which was polymd. with 980 parts 2,6-xylenol at 40.degree. in a xylene-MeOH soln. contg. NaOH, diethanolamine, Bu₂NH, and MgCl₂·4H₂O to give a poly(hydroxyphenylene ether) (IV; Mn 10,950, Mw 21,200). A mixt. of 70 parts III and 30 parts IV was kneaded at 310.degree., press molded, and treated at 120.degree. for 4 h to give a sheet showing flexural rigidity 2580 MPa at 23.degree., notched Izod impact strength 24.5 J/m, and good appearance.

ST hydroxy polyoxyphenylene carboxy polythiophenylene compatibility; impact resistance polyoxyphenylene polythiophenylene blend; rigidity polyoxyphenylene polythiophenylene blend

IT Polythiophenylenes

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(**functionalized**; thermoplastic poly(phenylene ether)-poly(phenylene sulfide) compns. with improved **compatibility**)

IT Impact-resistant materials

(thermoplastic poly(phenylene ether)-poly(phenylene sulfide) compns. with improved compatibility)

IT Plastics

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(thermoplastic poly(phenylene ether)-poly(phenylene sulfide) compns. with improved compatibility)

IT Polyoxyphenylenes

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(hydroxy-contg., thermoplastic poly(phenylene ether)-poly(phenylene sulfide) compns. with improved compatibility)

IT 149003-76-9, 2-Allyl-6-methylphenoxytrimethylsilane

RL: RCT (Reactant); RACT (Reactant or reagent)
(hydrolysis and oxidn. of; thermoplastic poly(phenylene ether)-poly(phenylene sulfide) compns. with improved compatibility)

IT 60-24-2, 2-Mercaptoethanol

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with allylmethylphenol; thermoplastic poly(phenylene ether)-poly(phenylene sulfide) compns. with improved compatibility)

IT 3354-58-3, 2-Allyl-6-methylphenol

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with mercaptoethanol; thermoplastic poly(phenylene ether)-poly(phenylene sulfide) compns. with improved **compatibility**)

IT 1807-43-8P, 2-(3-Hydroxypropyl)-6-methylphenol

144771-40-4P 144771-41-5P

RL: PNU (Preparation, unclassified); RCT (Reactant); **PREP** (**Preparation**); RACT (Reactant or reagent)
(thermoplastic poly(phenylene ether)-poly(phenylene sulfide) compns. with improved **compatibility**)

IT 70-49-5D, Thiomalic acid, reaction products with polythiophenylenes

106-91-2D, Glycidyl methacrylate, reaction products with polythiophenylenes 2530-85-0D, .gamma.-Methacryloxypropyltrimethoxysilane, reaction products with polythiophenylenes **148481-30-5**

150825-95-9D, Tohpren T 7, reaction products with thiomalic acid, methacryloxypropyltrimethoxysilane, glycidyl methacrylate, or [(epoxypropoxy)dimethylphenylmethyl]acrylamide 162883-93-4D, reaction products with polythiophenylenes

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)

(thermoplastic poly(phenylene ether)-poly(phenylene sulfide) compns. with improved **compatibility**)

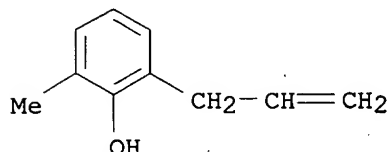
IT 3354-58-3, 2-Allyl-6-methylphenol

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with mercaptoethanol; thermoplastic poly(phenylene ether)-poly(phenylene sulfide) compns. with improved **compatibility**)

RN 3354-58-3 HCAPLUS

CN Phenol, 2-methyl-6-(2-propenyl)- (9CI) (CA INDEX NAME)



IT 1807-43-8P, 2-(3-Hydroxypropyl)-6-methylphenol

144771-40-4P 144771-41-5P

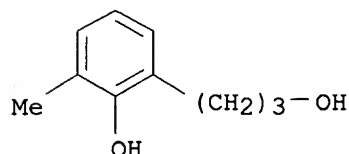
RL: PNU (Preparation, unclassified); RCT (Reactant); **PREP**

(**Preparation**); RACT (Reactant or reagent)

(thermoplastic poly(phenylene ether)-poly(phenylene sulfide) compns. with improved **compatibility**)

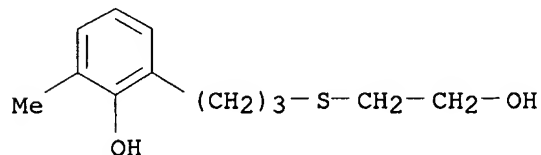
RN 1807-43-8 HCAPLUS

CN Benzenepropanol, 2-hydroxy-3-methyl- (9CI) (CA INDEX NAME)



RN 144771-40-4 HCAPLUS

CN Phenol, 2-[3-[(2-hydroxyethyl)thio]propyl]-6-methyl- (9CI) (CA INDEX NAME)



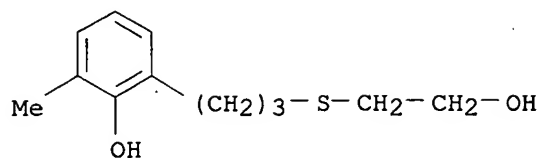
RN 144771-41-5 HCAPLUS

CN Phenol, 2-[3-[(2-hydroxyethyl)thio]propyl]-6-methyl-, polymer with 2,6-dimethylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 144771-40-4

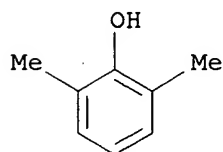
CMF C12 H18 O2 S



CM 2

CRN 576-26-1

CMF C8 H10 O



IT 148481-30-5

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(thermoplastic poly(phenylene ether)-poly(phenylene sulfide) compns.
with improved **compatibility**)

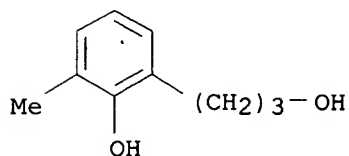
RN 148481-30-5 HCAPLUS

CN Benzenepropanol, 2-hydroxy-3-methyl-, polymer with 2,6-dimethylphenol
(9CI) (CA INDEX NAME)

CM 1

CRN 1807-43-8

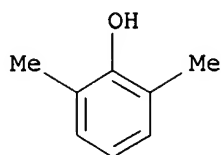
CMF C10 H14 O2



CM 2

CRN 576-26-1

CMF C8 H10 O



L44 ANSWER 30 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 1995:95219 HCAPLUS

DN 122:11543

TI Fire-resistant thermoplastic resin compositions

IN Nishihara, Hajime; Maeda, Katsuaki

PA Asahi Chemical Ind, Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L101-00

ICS C08K003-36; C08K005-03; C08K005-13; C08K005-20; C08K005-49;

C08K009-04

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06179823	A2	19940628	JP 1992-331634	19921211
PRAI	JP 1992-331634		19921211		

AB The title compns., showing good moldability and heat and impact resistance and useful for molded appliance housings, etc., contain thermoplastic resins, fireproofing agents, and .gtoreq.1 fireproofing aid selected from **hindered phenolic** antioxidants and peroxide-decompg. agents, dicarboxylic acid amides, and hydrocarbon compd.-coated silica. A mixt. of a rubber-modified styrene resin, a poly-2,6-xyleneol-Styron 685 blend, di-Ph resorcinol phosphate, (PhO)3PO, CR 741C (arom. condensed phosphate mixt.), Nobaekuseru 140 (polymer-coated red P), Irganox 1076, Sumilizer GS (phenolic antioxidant), Sumilizer P 16, Teflon 6J, and Kao Wax EB-FF was melted and hot-pressed to give a molding (1/8 in. thick) with heat resistance V-0, melt index 6.4, Izod impact strength 9.1 kg-cm/cm, and Vicat softening temp. 92.6.degree..

ST polyoxyphenylene styrene polymer blend fireproofing; fireproofing phosphorus compd polyoxyphenylene blend; antioxidant phenolic fireproofing polyoxyphenylene blend; phosphate fireproofing polyoxyphenylene styrene polymer

IT Polyoxyphenylenes

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(in styrene polymer blends contg. fireproofing agents)

IT Fireproofing agents

(phosphorus compds.; in polyoxyphenylene-styrene polymer blends)

IT Impact-resistant materials

(polyoxyphenylene-styrene polymer blends contg. fireproofing agents)

IT Plastics, molded

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(polyoxyphenylene-styrene polymer blends contg. fireproofing agents)

IT 9003-53-6, Polystyrene

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (Styron 685; in polyoxyphenylene blends contg. fireproofing agents)

IT 108-46-3D, Resorcin, esters with phosphoric acid and phenol
 108-95-2D, Phenol, esters with phosphoric acid and resorcinol 115-86-6,
 Triphenyl phosphate 7664-38-2D, Phosphoric acid, esters with phenol and
 resorcinol 57583-54-7, CR 733S 93981-32-9, CR 741C
 RL: MOA (Modifier or additive use); USES (Uses)
 (fireproofing agents; in polyoxyphenylene-styrene polymer blends)

IT 7723-14-0, Phosphorus, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (fireproofing agents; red, in polyoxyphenylene-styrene polymer blends)

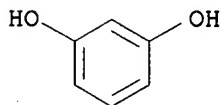
IT 471-46-5, Oxamide 2082-79-3, Irganox 1076 6683-19-8, Sumilizer BP 101
 31570-04-4, Sumilizer P 16 90498-90-1, Sumilizer GA 80 123968-25-2,
 Sumilizer GS
 RL: MOA (Modifier or additive use); USES (Uses)
 (in fire-resistant polyoxyphenylene-styrene polymer compns.)

IT 106974-54-3, Butadiene-styrene graft copolymer
 RL: POF (Polymer in formulation); TEM (Technical or engineered material
 use); USES (Uses)
 (in polyoxyphenylene blends contg. fireproofing agents)

IT 24938-67-8, Poly(2,6-xylenol), sru 25134-01-4, Poly(2,6-xylenol)
 RL: POF (Polymer in formulation); TEM (Technical or engineered material
 use); USES (Uses)
 (in styrene polymer blends contg. fireproofing agents)

IT 108-46-3D, Resorcin, esters with phosphoric acid and phenol
 RL: MOA (Modifier or additive use); USES (Uses)
 (fireproofing agents; in polyoxyphenylene-styrene polymer blends)

RN 108-46-3 HCAPLUS
 CN 1,3-Benzenediol (9CI) (CA INDEX NAME)



L44 ANSWER 31 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1994:192598 HCAPLUS
 DN 120:192598
 TI Manufacture of reactive silicon-containing polymers
 IN Fuku, Taisei; Kuramoto, Shigefumi; Yoneda, Tadahiro; Ueno, Tsunemasa
 PA Nippon Catalytic Chem Ind, Japan
 SO Jpn. Kokai Tokkyo Koho, 23 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08F299-08
 ICS C08F220-00; C08F230-08
 CC 35-4 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 42
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05295060	A2	19931109	JP 1992-101469	19920421
PRAI	JP 1992-101469		19920421		

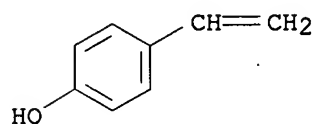
- AB The title polymers with good pigment dispersibility and forming water-repellent coatings with good adhesion to substrates are obtained by radical polymn. of (A) 0.5-60% polyfunctional organosilicon compds. $\text{Si}(\text{OZ})_r(\text{OR}_3)_s\text{R}_{4-r-s}$ and/or (B) 0.5-80% functional siloxanes of $(\text{ZO})_t(\text{R}_3\text{O})_u\text{R}_4\text{vSiO}(4-t-u-v)/2$ unit with M_n 400-100,000 and $t(M/N) = 0.5-10$ [$M = M_n$ of the component A; $N =$ component B content; $t =$ no. of reactive groups (Z) in the component B; $Z = \text{CH}_2:\text{CR}_1\text{CO}_2\text{R}_2-$, $\text{CH}_2:\text{CR}_1\text{CO}-$, $\text{CH}_2:\text{CR}_1\text{R}_2-$, $\text{CH}_2:\text{CR}_1\text{CONHR}_2-$, $\text{CH}_2:\text{CR}_1\text{CONHR}_2\text{CO}-$, $\text{CH}_2:\text{CR}_1\text{R}_2\text{CO}-$; $\text{R}_1 = \text{H}, \text{Me}$; $\text{R}_2 = \text{C}_1-20$ divalent org. group; $\text{R}_3 = \text{H}$, (un)substituted C_1-20 alkyl, (un)substituted C_5-10 cycloalkyl, (un)substituted C_6-20 aryl, (un)substituted C_7-20 aralkyl; (un)substituted C_1-20 acyl; $\text{R}_4 = \text{C}_1-20$ org. group; $r = 2-4$; $s = 0-2$; $r + s = 2-4$; $t \geq 3$; $u, v = 0-3$; $(t + u + v) \leq 3$], and (C) monofunctional monomer with unsatd. group copolymerizable with the reactive group Z in an org. solvent. Polymn. of bis(methacryloyloxyethoxy)dimethoxysilane 8.6, tris(methacryloyloxyethoxy)methoxysilane 1.0, methacryloyloxyethoxytrimethoxysilane 22.4, and Me methacrylate 68.0 g in toluene in the presence of AIBN gave a copolymer that gelled completely when heated with Me methacrylate in toluene in the presence of AIBN.
- ST silicon contg acrylic polymer; water repellent coating silicon acrylic
- IT Siloxanes and Silicones, preparation
- RL: PREP (Preparation)
(acrylic, manuf. of reactive, with good filler compatibility and for water-repellent coatings)
- IT Coating materials
(water-resistant, acrylic polymers contg. silicon)
- IT 120358-73-8P 146408-19-7P 146408-20-0P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manuf. and polymn. of)
- IT 79-41-4DP, reaction products with siloxanes, polymers with acrylic or vinyl compds. 80-62-6DP, polymer with Me methacrylate and methacryloyloxy group-contg. siloxanes 80-62-6DP, polymer with lauryl methacrylate and methacryloyloxy group-contg. siloxanes 100-42-5DP, polymer with methacryloyloxy group-contg. siloxanes 101-43-9DP, Cyclohexyl methacrylate, polymer with methacryloyloxy group-contg. siloxanes 103-11-7DP, 2-Ethylhexyl acrylate, polymer with methacryloyloxy group-contg. siloxanes 141-32-2DP, polymer with methacryloyloxy group-contg. siloxanes 868-77-9DP, reaction products with siloxanes, polymers with acrylic or vinyl compds. **2628-17-3DP**, 4-Hydroxystyrene, reaction products with siloxanes, polymers with acrylic or vinyl compds. 2761-08-2DP, 3-Hydroxypropyl acrylate, reaction products with siloxanes, polymers with acrylic or vinyl compds. 7370-88-9DP, N-Ethylmethacrylamide, polymer with methacryloyloxy group-contg. siloxanes 44915-40-4DP, reaction products with siloxanes, polymers with acrylic or vinyl compds. 153650-62-5P 153650-65-8P 153650-66-9P 153650-68-1P 153650-69-2P 153650-70-5P 153738-96-6P
RL: PREP (Preparation)
(manuf. of reactive, with good filler compatibility and for water-repellent coatings)
- IT 681-84-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydroxyethyl methacrylate)
- IT 868-77-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with tetramethoxysilane)
- IT **2628-17-3DP**, 4-Hydroxystyrene, reaction products with siloxanes, polymers with acrylic or vinyl compds.

RL: PREP (Preparation)

(manuf. of reactive, with good filler **compatibility** and for water-repellent coatings)

RN 2628-17-3 HCAPLUS

CN Phenol, 4-ethenyl- (9CI) (CA INDEX NAME)



L44 ANSWER 32 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 1994:165275 HCAPLUS

DN 120:165275

TI Process for producing polycarbonate and polycarbonate composition

IN Kanno, Tatsuya; Yamato, Tsutomu; Oshino, Yasuhiro; Fukuda, Yutaka; Iguchi, Yoshihiro; Kuwana, Takkaaki; Matsumoto, Toshihiro

PA Daicel Chemical Industries, Ltd., Japan

SO Eur. Pat. Appl., 107 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C08G064-30

ICS C08G063-64; C08G063-87; C08K005-52; C08K005-5317; C08K005-13;

C08L069-00

CC 35-5 (Chemistry of Synthetic High **Polymers**)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 559953	A2	19930915	EP 1992-115087	19920903
	EP 559953	A3	19940126		
	R: DE, FR, GB				
	US 5278279	A	19940111	US 1992-940310	19920831
	JP 05310906	A2	19931122	JP 1992-296888	19921106
	US 5391690	A	19950221	US 1993-70733	19930602
	US 5387628	A	19950207	US 1993-119368	19930909
	CN 1186816	A	19980708	CN 1997-115352	19970730
PRAI	JP 1992-52421		19920311		
	US 1992-940310		19920831		
	US 1993-70733		19930602		

OS MARPAT 120:165275

AB Poly(ester)carbonates are prepd. from dihydroxy compds. and diesters of (di)carbonic acid in the presence of transesterification catalysts and org. P compds. and, optionally, **hindered phenols**. The process gives transparent and colorless polymers.

ST polycarbonate transparent colorless; carbonic acid diester polycarbonate; transesterification catalyst polycarbonate prepn; phosphorus compd polycarbonate prepn; **phenol hindered** polycarbonate prepn

IT Polycarbonates, preparation

RL: PREP (Preparation)

(prepn. of, in presence of transesterification catalysts org. phosphorus compds. and **hindered phenols**)

IT Amines, uses

RL: USES (Uses)

- (alicyclic, prepn. of polycarbonates by transesterification in presence of)
- IT Amines, uses
RL: USES (Uses)
(aliph., prepn. of polycarbonates by transesterification in presence of)
- IT Amines, uses
RL: USES (Uses)
(aryl, prepn. of polycarbonates by transesterification in presence of)
- IT Pyridinium compounds
Quaternary ammonium compounds, uses
RL: CAT (Catalyst use); USES (Uses)
(halides, catalysts, for prepn. of polycarbonates by transesterification)
- IT **Phenols**, uses
RL: PREP (Preparation)
(**hindered**, prepn. of polycarbonates by transesterification in presence of)
- IT Onium compounds
RL: PREP (Preparation)
(isoquinolinium, halides, catalysts, for prepn. of polycarbonates by transesterification)
- IT Onium compounds
RL: PREP (Preparation)
(picolinium, halides, catalysts, for prepn. of polycarbonates by transesterification)
- IT Polyesters, preparation
RL: PREP (Preparation)
(polycarbonate-, prepn. of, in presence of transesterification catalysts org. phosphorus compds. and **hindered phenols**)
- IT Polycarbonates, preparation
RL: PREP (Preparation)
(polyester-, prepn. of, in presence of transesterification catalysts org. phosphorus compds. and **hindered phenols**)
- IT Onium compounds
RL: PREP (Preparation)
(quinolinium, halides, catalysts, for prepn. of polycarbonates by transesterification)
- IT Polymerization catalysts
(transesterification, for prepn. of polycarbonates from carbonic acid diesters and dihydroxy compds.)
- IT 62-54-4, Calcium acetate 100-67-4, Potassium phenolate 127-08-2, Potassium acetate 127-09-3, Sodium acetate 139-02-6, Sodium phenolate 142-72-3, Magnesium acetate 143-66-8, Sodium tetraphenylborate 144-55-8, Sodium hydrogen carbonate, uses 298-14-6, Potassium hydrogen carbonate 471-34-1, Calcium carbonate, uses 497-19-8, Sodium carbonate, uses 513-77-9, Barium carbonate 532-32-1, Sodium benzoate 543-80-6, Barium acetate 543-94-2, Strontium acetate 546-89-4, Lithium acetate 546-93-0, Magnesium carbonate 553-54-8, Lithium benzoate 554-13-2, Lithium carbonate 555-24-8, Lithium phenolate 557-04-0, Magnesium stearate 582-25-2, Potassium benzoate 584-08-7, Potassium carbonate 593-29-3, Potassium stearate 822-16-2, Sodium stearate 1122-58-3, 4-Dimethylaminopyridine 1305-62-0, Calcium hydroxide, uses 1309-42-8, Magnesium hydroxide 1310-58-3, Potassium hydroxide, uses 1310-65-2, Lithium hydroxide 1310-73-2, Sodium hydroxide, uses 1592-23-0, Calcium stearate 1633-05-2, Strontium carbonate 2090-64-4, Magnesium hydrogen carbonate 2444-90-8, Bisphenol A disodium salt

2456-81-7, 4-Pyrrolidinopyridine 3983-19-5, Calcium hydrogen carbonate
 4485-12-5, Lithium stearate 5006-97-3, Lithium hydrogen carbonate
 6865-35-6, Barium stearate 7100-62-1, Carbonic acid, barium salt (2:1)
 7100-64-3, Carbonic acid, strontium salt (2:1) 7558-79-4, Disodium
 hydrogen phosphate 7664-41-7, Ammonia, uses 7758-11-4, Dipotassium
 hydrogen phosphate 10196-69-7, Strontium stearate 13730-42-2,
 Bisphenol A dipotassium salt 13762-51-1, Potassium borohydride
 16940-66-2, Sodium borohydride 16949-15-8, Lithium borohydride
 17194-00-2, Barium hydroxide 18480-07-4, Strontium hydroxide
 33943-39-4, Dilithium hydrogen phosphate 67306-98-3, Bisphenol A
 dilithium salt

RL: CAT (Catalyst use); USES (Uses)

(catalysts, for prepn. of polycarbonates by transesterification)

IT 85-60-9 101-02-0, Triphenyl phosphite 102-85-2, Tributyl phosphite
 116-17-6, Triisopropyl phosphite 122-52-1, Triethyl phosphite
 554-70-1, Triethyl phosphine 603-35-0, Triphenyl phosphine, uses
 620-42-8, Tri-p-tolyl phosphite 976-56-7 998-40-3, Tri-n-butyl
 phosphine 1038-95-5, Tri-p-tolyl phosphine 1709-70-2 1843-03-4
 2082-79-3 2234-97-1, Tri-n-propyl phosphine 2622-08-4, Tri-o-tolyl
 phosphite 2677-30-7 3001-56-7 3050-88-2 3076-63-9, Tridodecyl
 phosphite 6163-58-2, Tri-o-tolyl phosphine 6476-36-4, Triisopropyl
 phosphine 6683-19-8 20227-30-9 23128-74-7 25448-25-3, Triisodecyl
 phosphite 26544-23-0, Diphenyl isodecyl phosphite 26741-53-7
 27676-62-6 31570-04-4 35074-77-2 36443-68-2 68311-09-1
 80693-00-1 85417-41-0 86624-80-8 115311-94-9 153660-38-9
 153660-39-0 153660-40-3 **153660-41-4D**, C1-24 esters
 153697-35-9

RL: USES (Uses)

(prepn. of polycarbonates by transesterification in presence of)

IT 24936-68-3P, preparation 25929-04-8P, Bisphenol A-diphenyl carbonate
 copolymer 117725-61-8P 127939-67-7P, Bisphenol A-bis(2,4,6-
 trichlorophenyl)carbonate copolymer

RL: PREP (Preparation)

(prepn. of, in presence of transesterification catalysts org.
 phosphorus compds. and **hindered phenols**)

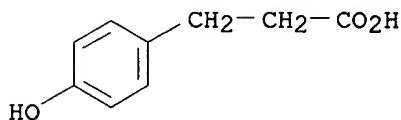
IT **153660-41-4D**, C1-24 esters

RL: USES (Uses)

(prepn. of polycarbonates by transesterification in presence of)

RN 153660-41-4 HCAPLUS

CN Benzenepropanoic acid, bis(1,1-dimethylethyl)-4-hydroxy- (9CI) (CA INDEX
 NAME)



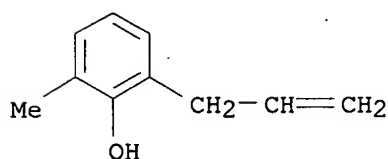
2 (D1- Bu-t)

L44 ANSWER 33 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1993:561711 HCAPLUS
 DN 119:161711
 TI Modified poly(phenylene ether) compositions

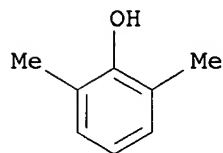
IN Kihira, Michiharu; Aritomi, Mitsutoshi; Tsukahara, Tooru
 PA Mitsubishi Petrochemical Co, Japan
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08L071-12
 ICS C08L023-00; C08L063-00
 CC 37-6 (Plastics Manufacture and Processing)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05059269	A2	19930309	JP 1991-220364	19910830
PRAI	JP 1991-220364		19910830		
AB	The title compns. with improved compatibility and dispersibility, giving moldings with good impact strength, solvent resistance, and appearance, comprise 10-90% epoxy-contg. olefin polymers and 10-90% modified poly(phenylene ethers) prepd. by treating poly(phenylene ethers) contg. arom. main chain substituted with CR1R2CR3:CR4R5 [R1-R5 = independently H, halogen, aryl, C1-20 alkyl(alkoxy)] with .alpha., .beta.-unsatd. carbonyl compds. Thus, 61 parts 2-allyl-6-methylphenol and 950 parts 2,6-xylenol were polymd. to obtain a poly(phenylene ether) contg. 4.8 mol% allyl groups, 500 g of which were treated with 110 g maleic anhydride to give a modified poly(phenylene ether) (I) contg. 0.9% maleic anhydride. Sep., 250 g polypropylene was treated with 100 g glycidyl methacrylate to obtain a graft polymer contg. 0.69% glycidyl methacrylate, 50 parts of which was melt kneaded with 50 parts I, then, hot pressed to give a sheet showing Izod impact strength 35.8 kg-cm/cm with good dispersion of I in particles with 1-2 .mu.m av. diam.				
ST	impact strength polyphenylene ether blend; polyphenylene ether blend polyolefin compatibility; epoxy polyolefin blend polyphenylene ether				
IT	Impact-resistant materials (maleic anhydride-modified poly(phenylene ethers) blends, with epoxy-contg. polyolefins, with good compatibility)				
IT	Plastics RL: USES (Uses) (maleic anhydride-modified poly(phenylene ethers) blends, with epoxy-contg. polyolefins, with good compatibility, impact-resistant)				
IT	Polyoxyphenylenes RL: USES (Uses) (maleic anhydride-modified, blends, with epoxy-contg. polyolefins, with good compatibility, impact-resistant)				
IT	Alkenes, polymers RL: USES (Uses) (polymers, epoxy-contg., blends, with maleic anhydride-modified poly(phenylene ethers), with good compatibility, impact-resistant)				
IT	110221-98-2, Glycidyl methacrylate-propylene graft copolymer RL: USES (Uses) (blends with maleic anhydride-modified poly(phenylene ethers), with good compatibility, impact-resistant)				
IT	108-31-6D, Maleic anhydride, reaction products with poly(phenylene ethers) 27134-42-5D, reaction products with maleic anhydride RL: USES (Uses) (blends, with epoxy-contg. polyolefins, with good compatibility, impact-resistant)				
IT	140376-23-4 RL: USES (Uses) (blends, with maleic anhydride-modified poly(phenylene ethers), with				

good compatibility, impact-resistant)
 IT 27134-42-5D, reaction products with maleic anhydride
 RL: USES (Uses)
 (blends, with epoxy-contg. polyolefins, with good compatibility
 , impact-resistant)
 RN 27134-42-5 HCAPLUS
 CN Phenol, 2,6-dimethyl-, polymer with 2-methyl-6-(2-propenyl)phenol (9CI)
 (CA INDEX NAME)
 CM 1
 CRN 3354-58-3
 CMF C10 H12 O



CM 2
 CRN 576-26-1
 CMF C8 H10 O



L44 ANSWER 34 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1993:518389 HCAPLUS
 DN 119:118389
 TI UV photostabilizers in polymers
 AU Catalina, F.; Arias, B.
 CS Inst. Cienc. Tecnol. Polim., CSIC, Madrid, 28006, Spain
 SO Revista de Plasticos Modernos (1993), 65(440), 137-48
 CODEN: RPMOAM; ISSN: 0034-8708
 DT Journal; General Review
 LA Spanish
 CC 37-0 (Plastics Manufacture and Processing)
 Section cross-reference(s): 74
 AB A review with 30 refs. on properties of UV stabilizers for polymers and plastics and formulation methods according to the properties. Stabilization mechanisms and photochem. reactions in polymers, formulations (pigments, metal complexes, salicylic acid derivs., benzophenone and benzotriazole derivs., **sterically hindered** amines and **phenols**, org. phosphates), and polymeric stabilizers are discussed.

ST review photostabilizer compn mechanism polymer; pigment photostabilizer
polymer review; metal complex polymer photostabilizer review

IT Polymers, miscellaneous
RL: MSC (Miscellaneous)
(UV photostabilizers for)

IT Pigments
Coordination compounds
RL: USES (Uses)
(UV stabilizer formulations contg., for polymers)

IT Light stabilizers
(UV, compns. and mechanisms of, for polymers)

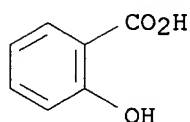
IT Amines, uses
Phenols, uses
RL: USES (Uses)
(**hindered**, UV stabilizer formulations contg., for polymers)

IT **69-72-7D**, derivs. 95-14-7D, 1H-Benzotriazole, derivs.
119-61-9D, Benzophenone, derivs.
RL: USES (Uses)
(UV stabilizer formulations contg., for polymers)

IT **69-72-7D**, derivs.
RL: USES (Uses)
(UV stabilizer formulations contg., for polymers)

RN 69-72-7 HCAPLUS

CN Benzoic acid, 2-hydroxy- (9CI) (CA INDEX NAME)



L44 ANSWER 35 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 1993:497117 HCAPLUS

DN 119:97117

TI Polythioarylene-polyoxyphenylene compositions

IN Kawashima, Kyotaka

PA Dainippon Ink & Chemicals, Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF

DT Patent

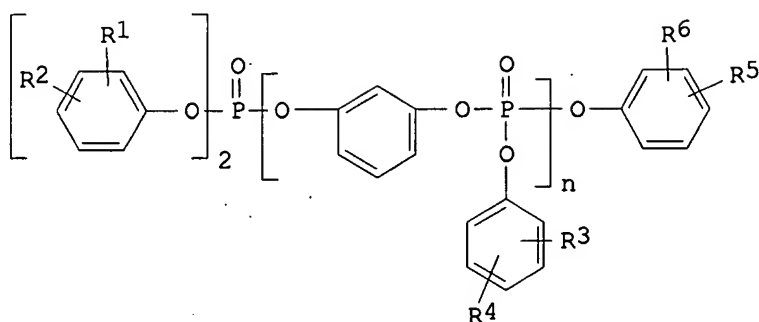
LA Japanese

IC ICM C08L081-04
ICS C08K005-523; C08L071-12

CC 37-6 (**Plastics** Manufacture and Processing)
Section cross-reference(s): 35

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05025391	A2	19930202	JP 1991-176776	19910717
PRAI	JP 1991-176776		19910717		
GI					



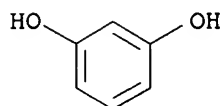
I

- AB Title compns. with improved compatibility comprise 100 parts blends of polythioarylenes and polyoxyphenylenes and 0.1-10 parts I (R1-6 = H, lower alkyl; n .gtoreq.0). Thus, a blend of p-dichlorobenzene-sodium sulfide copolymer 60, poly(2,6-xylenol) 40, and I (R1-6 = H) 1.0 part was injection-molded into a strip (50 .times. 100 .times.2 mm) with good surface.
- ST polythioarylene polyoxyphenylene compatibilizer aryl polyphosphate
- IT Plastics
 RL: USES (Uses)
 (blends of polythioarylenes and polyoxyphenylenes, compatibilizers for, aryl polyphosphates as)
- IT Polythioarylenes
 Polythiophenylenes
 RL: USES (Uses)
 (blends with polyoxyphenylenes, compatibilizers for, aryl polyphosphates as)
- IT Polyoxyphenylenes
 RL: USES (Uses)
 (blends with polythioarylenes, compatibilizers for, aryl polyphosphates as)
- IT **108-46-3D**, Resorcin, polyesters with phosphoric acid, esters with alkylphenols 108-95-2D, Phenol, alkyl derivs., esters with resorcinol polyphosphates 108-95-2D, Phenol, esters with resorcinol polyphosphates 1319-77-3D, Cresol, esters with resorcinol polyphosphates 7664-38-2D, Phosphoric acid, polyesters with resorcinol, esters with alkylphenols 25168-06-3D, Isopropylphenol, esters with resorcinol polyphosphates 27923-56-4D, Diisopropylphenol, esters with resorcinol polyphosphates
 RL: USES (Uses)
 (**compatibilizers**, for blends of polythioarylenes and polyoxyphenylenes)
- IT 25212-74-2P, p-Dichlorobenzene-sodium sulfide copolymer, sru 26125-40-6P, p-Dichlorobenzene-sodium sulfide copolymer
 RL: PREP (Preparation)
 (prepn. of, blends with polyoxyphenylenes, compatibilizers for, aryl polyphosphates as)
- IT 24938-67-8P, Poly[oxy(2,6-dimethyl-1,4-phenylene)] 25134-01-4P, Poly(2,6-xylenol)
 RL: PREP (Preparation)
 (prepn. of, blends with polythioarylenes, compatibilizers for, aryl polyphosphates as)
- IT **108-46-3D**, Resorcin, polyesters with phosphoric acid, esters with alkylphenols
 RL: USES (Uses)

(compatibilizers, for blends of polythioarylenes and polyoxyphenylenes)

RN 108-46-3 HCAPLUS

CN 1,3-Benzenediol (9CI) (CA INDEX NAME)



L44 ANSWER 36 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 1993:193091 HCAPLUS

DN 118:193091

TI Thermoplastic polyoxyphenylene-polyamide compositions

IN Tsukahara, Tooru; Kihira, Michiharu; Araki, Jusuke; Kato, Yoshio; Aritomi, Mitsutoshi

PA Mitsubishi Petrochemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L071-12

ICS C08L077-00

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 35

FAN.CNT 1

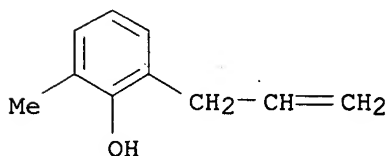
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04325558	A2	19921113	JP 1991-122806	19910426
PRAI	JP 1991-122806		19910426		
AB	Title compns. with improved compatibility and impact resistance comprise polyamides and modified polyoxyphenylenes obtained by treating polyoxyphenylenes contg. CR1R2CR3:CR4R5 (R1-5 = H, halo, aryl, C1-20 alkoxy) in backbone arom. rings with .alpha.,.beta.-unsatd. carbonyl compds. Thus, 2,6-dimethylphenol-2-allyl-6-methylphenol copolymer was treated with maleic anhydride and a mixt. of 40 parts of the modified polymer and 60 parts Ultramid KR 4411 was pressed at 250.degree. to give a 2-mm-thick sheet, which contained the modified polyoxyphenylenes in particles of 100-150 nm. A 2-mm-thick sheet pressed from the mixt. at 280.degree. showed Izod impact strength 44 kg.cm/cm.				
ST	modified polyoxyphenylene polyamide compatibility improvement; impact resistance modified polyoxyphenylene polyamide; unsatd carbonyl modification alkenyl polyoxyphenylene				
IT	Impact-resistant materials (blends of modified polyoxyphenylenes and polyamides)				
IT	Polyamides, miscellaneous RL: MSC (Miscellaneous) (blends of modified polyoxyphenylenes and, with improved compatibility, impact-resistant)				
IT	Polyamides, uses RL: USES (Uses) (blends with modified polyoxyphenylenes, with improved compatibility, impact-resistant)				
IT	Polyoxyphenylenes RL: USES (Uses)				

- (alkenyl group-contg., reaction products with .alpha.,.beta.-unsatd. carbonyl compds., blends with polyamides, with improved compatibility, impact-resistant)
- IT Carbonyl compounds, compounds
RL: USES (Uses)
(.alpha.,.beta.-unsatd., reaction products with alkenyl group-contg. polyoxyphenylenes, blends with polyamides, with improved compatibility, impact-resistant)
- IT 24938-67-8, Poly[oxy(2,6-dimethyl-1,4-phenylene)] 25134-01-4, Poly(2,6-xyleneol)
RL: USES (Uses)
(blends with modified polyoxyphenylenes and polyamides, with improved compatibility, impact-resistant)
- IT 25038-54-4, Ultramid KR 4411, uses
RL: USES (Uses)
(blends with modified polyoxyphenylenes, with improved compatibility, impact-resistant)
- IT 108-31-6DP, Maleic anhydride, reaction products with allylmethylphenol-dimethylphenol copolymers **27134-42-5DP**, 2-Allyl-6-methylphenol-2,6-dimethylphenol copolymer, reaction products with maleic anhydride
RL: **PREP (Preparation)**
(prepn. of, blends with polyamides, with improved **compatibility**, impact-resistant)
- IT **27134-42-5DP**, 2-Allyl-6-methylphenol-2,6-dimethylphenol copolymer, reaction products with maleic anhydride
RL: **PREP (Preparation)**
(prepn. of, blends with polyamides, with improved **compatibility**, impact-resistant)
- RN 27134-42-5 HCAPLUS
- CN Phenol, 2,6-dimethyl-, polymer with 2-methyl-6-(2-propenyl)phenol (9CI)
(CA INDEX NAME)

CM 1

CRN 3354-58-3

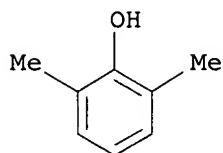
CMF C10 H12 O



CM 2

CRN 576-26-1

CMF C8 H10 O



L44 ANSWER 37 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 1993:148287 HCAPLUS

DN 118:148287

TI Preparation of modified polyoxyphenylenes

IN Kato, Yoshio; Tsukahara, Toru; Kihira, Michiharu; Aritomi, Mitsutoshi

PA Mitsubishi Petrochemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08G065-48

CC 35-8 (Chemistry of Synthetic High Polymers)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04277523	A2	19921002	JP 1991-39951	19910306
PRAI	JP 1991-39951		19910306		

AB The title polymers, bearing reactive groups and having good **compatibility**, are prep'd. by reacting polyoxyphenylenes with unsat'd. carboxylic acid or other **functional** derivs. in molten state in a compression mold. Thus, heating 0.6 g poly(2,6-dimethyl-1.4-oxyphenylene) with 3% maleic anhydride (I) at 280.degree. for 1 min and heating at 200 kg/cm² for 5 min gave a 0.2% I-modified polymer.

ST maleated polyoxyphenylene prep'n; reactive group contg polyoxyphenylene prep'n

IT Polyoxyphenylenes

RL: PREP (Preparation)

(reactive group-contg., prep'n. of, with good **compatibility**)

IT 106-91-2DP, Glycidyl methacrylate, reaction products with polyoxyphenylene

108-31-6DP, Maleic anhydride, reaction products with polyoxyphenylenes

868-77-9DP, 2-Hydroxyethyl methacrylate, reaction products with

polyoxyphenylenes 24938-67-8DP, 2,6-Xylenol polymer, SRU, maleated

25134-01-4DP, Poly(2,6-xylenol), maleated **27134-42-5DP**,

2-Allyl-6-methylphenol-2,6-dimethylphenol copolymer, maleated

RL: **PREP (Preparation)**(prep'n. of, reactive group-contg., with good **compatibility**)IT **27134-42-5DP**, 2-Allyl-6-methylphenol-2,6-dimethylphenol copolymer, maleatedRL: **PREP (Preparation)**(prep'n. of, reactive group-contg., with good **compatibility**)

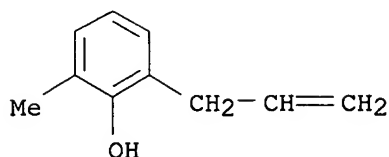
RN 27134-42-5 HCAPLUS

CN Phenol, 2,6-dimethyl-, polymer with 2-methyl-6-(2-propenyl)phenol (9CI)
(CA INDEX NAME)

CM 1

CRN 3354-58-3

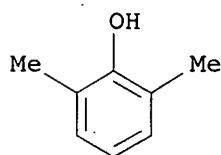
CMF C10 H12 O



CM 2

CRN 576-26-1

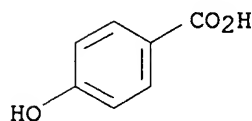
CMF C8 H10 O



L44 ANSWER 38 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1993:126070 HCAPLUS
 DN 118:126070
 TI Piperidyl-based hindered amines and 3,5-disubstituted-4-hydroxybenzoates
 as light stabilizers for pigmented polyolefin fibers and films
 IN Kletecka, George
 PA Goodrich, B. F., Co., USA
 SO Eur. Pat. Appl., 24 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM C08K005-00
 ICS C08L023-02
 ICI C08K005-00, C08K005-13, C08K005-3435
 CC 38-3 (**Plastics** Fabrication and Uses)
 Section cross-reference(s): 37, 40
 FAN.CNT 1

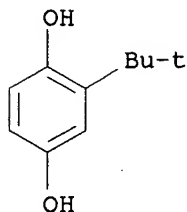
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 501239	A1	19920902	EP 1992-102386	19920213
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, PT, SE				
US 5190710	A	19930302	US 1991-659213	19910222
CA 2060989	AA	19920823	CA 1992-2060989	19920211
JP 05148772	A2	19930615	JP 1992-36308	19920224
PRAI US 1991-659213		19910222		
OS MARPAT 118:126070				
AB	Polyolefin films and fibers, pigmented with blue and green phthalocyanine and red azo and disazo pigments, are stabilized for improved discoloration resistance by a combination of primary light stabilizers comprising (A) piperidyl-based hindered amine light stabilizer (contg. .gtoreq.2 polysubstituted piperidyl groups; and (B) a 3,5-disubstituted 4-hydroxybenzoate. The stabilizer system in combination with enough secondary stabilizer, e.g., hindered phenol and a phosphite, provides good melt stability during processing. Polypropene			

- fibers pigmented with 0.75 phr Yellow 93 and stabilized with 0.6 phr Chimassorb 119 and 0.6 phr UV-Chek AM-340 never exceeded a color shift of three units at .apprx.1200 KJ/m2.
- ST polyolefin light stabilizer hindered amine; piperidyl contg light stabilizer polyolefin; hydroxybenzoate light stabilizer polyolefin; alkylphenyl hydroxybenzoate light stabilizer polyolefin; pigmented polypropylene fiber light stabilizer
- IT Polypropene fibers, miscellaneous
 RL: MSC (Miscellaneous)
 (pigmented, light stabilizers for, piperidyl-based hindered amines and disubstituted hydroxybenzoates as)
- IT Light stabilizers
 (piperidyl-contg. hindered amines and disubstituted hydroxybenzoate compds., for pigmented polyolefin fibers and films)
- IT Amines, uses
 RL: USES (Uses)
 (hindered, light stabilizers contg., for pigmented polyolefin fibers and films)
- IT Alkenes, polymers
 RL: USES (Uses)
 (polymers, films, pigmented, light stabilizers for, piperidyl-based hindered amines and disubstituted hydroxybenzoates as)
- IT 9003-07-0, Polypropylene 9010-79-1, Ethylene-propene copolymer 106565-43-9, Ethylene-propene block copolymer
 RL: USES (Uses)
 (films, pigmented, light stabilizers for, piperidyl-based hindered amines and disubstituted hydroxybenzoates as)
- IT **99-96-7D**, p-Hydroxybenzoic acid, esters, 3,5-disubstituted
 4221-80-1 52829-07-9 63843-89-0 70198-29-7 71878-19-8 90751-07-8
 95078-42-5, Hostavin N 20 106990-43-6, Chimassorb 119 110843-97-5, Topanex 500H
 RL: USES (Uses)
 (light stabilizers contg., for pigmented polyolefin fibers and films)
- IT **99-96-7D**, p-Hydroxybenzoic acid, esters, 3,5-disubstituted
 RL: USES (Uses)
 (light stabilizers contg., for pigmented polyolefin fibers and films)
- RN 99-96-7 HCAPLUS
- CN Benzoic acid, 4-hydroxy- (9CI) (CA INDEX NAME)



- L44 ANSWER 39 OF 57 HCAPLUS COPYRIGHT 2003 ACS
- AN 1993:22764 HCAPLUS
- DN 118:22764
- TI Antioxidant activity of polymers bearing **hindered phenolic groups**
- AU Yamaguchi, Hidemasa; Itoh, Mari; Ishikawa, Hiromi; Kusuda, Kousuke
- CS Fac. Sci. Living, Osaka City Univ., Smiyoshi, 558, Japan
- SO Journal of Macromolecular Science, Pure and Applied Chemistry (1993), A30(4), 287-92
 CODEN: JSPCE6; ISSN: 1060-1325
- DT Journal

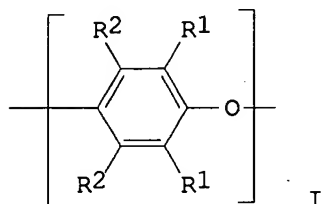
- LA English
 CC 35-8 (Chemistry of Synthetic High **Polymers**)
 Section cross-reference(s): 17
 AB Polyallylamine (I) and polystyrene (II) beads were reacted with 3,5-dibutyl-4-hydroxybenzaldehyde (III) and tert-butylhydroquinone (IV), resp. The product beads I-III and II-IV worked functionally as antioxidants. The antioxidant effect of the polymer beads in the oxidn. of linoleic acid suspensions was studied by both the ferric thiocyanate and thiobarbituric acid methods. The antioxidant activity for II-IV beads was higher than that for I-III beads. The antioxidant activity for 2 mg of BHT corresponded to that for 11.7 g of I-III beads and that for 0.6 g of II-IV beads. The polymer beads are potential antioxidants for foods since their sepn. from a food oil after their use is easy because of their insoly.
 ST antioxidant polyallylamine dibutylhydroxybenzaldehyde polystyrene butylhydroquinone; polyallylamine butylhydroxybenzaldehyde deriv antioxidant food; polystyrene butylhydroquinone deriv antioxidant food; food antioxidant polymer **hindered phenol**
 IT Food
 (antioxidants for, polyallylamine dibutylhydroxybenzaldehyde derivs. and polystyrene butylhydroquinone derivs. as potential)
 IT Antioxidants
 (polyallylamine dibutylhydroxybenzaldehyde derivs. and polystyrene tert-butylhydroquinone derivs., prepn. and potential food use of)
 IT **1948-33-ODP**, tert-Butylhydroquinone, reaction products with polystyrene 9003-53-6DP, Polystyrene, reaction products with tert-butylhydroquinone 30551-89-4DP, Polyallylamine, reaction products with 3,5-dibutyl-4-hydroxybenzaldehyde 145176-77-8DP, reaction products with polyallylamine
 RL: **SPN (Synthetic preparation); PREP (Preparation)**
 (antioxidants, prepn. and activity and potential food use of)
 IT **1948-33-ODP**, tert-Butylhydroquinone, reaction products with polystyrene
 RL: **SPN (Synthetic preparation); PREP (Preparation)**
 (antioxidants, prepn. and activity and potential food use of)
 RN 1948-33-0 HCAPLUS
 CN 1,4-Benzenediol, 2-(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



- L44 ANSWER 40 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1992:652061 HCAPLUS
 DN 117:252061
 TI Preparation of modified poly(phenylene ethers) with improved compatibility
 IN Kato, Yoshio; Tsukahara, Toru; Kihira, Michiharu; Aritomi, Mitsutoshi
 PA Mitsubishi Petrochemical Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese
 IC ICM C08F283-08
 CC 35-8 (Chemistry of Synthetic High Polymers)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04180908	A2	19920629	JP 1990-309567	19901115
PRAI	JP 1990-309567		19901115		
GI					



AB The title polymers are prepd. by heating poly(phenylene ethers) bearing .gtoreq.10 repeating units of I [R1 = halo, primary or secondary alkyl, alkenyl, Ph, aminoalkyl, (halogenated) hydrocarbyloxy; R2 = H, halo, primary or secondary alkyl, Ph, haloalkyl, (halogenated) hydrocarbyloxy] with aliph. unsatd. dicarboxylic acid anhydrides in molten state. Thus, 54 g poly(2,6-dimethyl-1,4-phenylene ether) and 3% maleic anhydride (II) were melt kneaded at 280.degree. for 6 min to give a 1.3% II-modified polymer.

ST modified polyphenylene ether compatibilizer; carboxy contg polyphenylene ether prepn; maleated polyoxyphenylene compatibilizer

IT Polyoxyphenylenes
 RL: PREP (Preparation)
 (maleated, prepn. of, for compatibilizers)

IT 108-31-6DP, Maleic anhydride, reaction products with polyoxyphenylenes 24938-67-8DP, Poly(2,6-dimethyl-1,4-phenylene ether), reaction products with maleic anhydride 25134-01-4DP, 2,6-Dimethylphenol homopolymer, reaction products with maleic anhydride **27134-42-5DP**, 2-Allyl-6-methylphenol-2,6-dimethylphenol copolymer, reaction products with maleic anhydride
 RL: **PREP (Preparation)**
 (prepn. of, for **compatibilizers**)

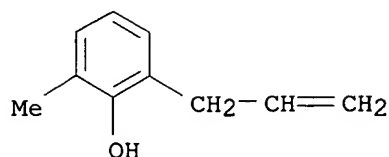
IT **27134-42-5DP**, 2-Allyl-6-methylphenol-2,6-dimethylphenol copolymer, reaction products with maleic anhydride
 RL: **PREP (Preparation)**
 (prepn. of, for **compatibilizers**)

RN 27134-42-5 HCAPLUS

CN Phenol, 2,6-dimethyl-, polymer with 2-methyl-6-(2-propenyl)phenol (9CI)
 (CA INDEX NAME)

CM 1

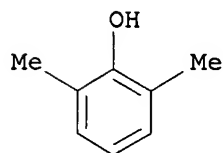
CRN 3354-58-3
 CMF C10 H12 O



CM 2

CRN 576-26-1

CMF C8 H10 O

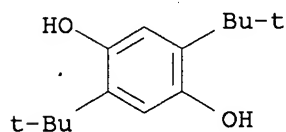


L44 ANSWER 41 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1992:592549 HCAPLUS
 DN 117:192549
 TI Process and catalysts for polymerization of ethylene
 IN Tamura, Masanori; Sakakibara, Yasuhisa; Sato, Hiroshi; Takaoka, Toru
 PA Ube Industries, Ltd., Japan
 SO Eur. Pat. Appl., 8 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM C08F004-649
 ICS C08F010-02
 CC 35-3 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 67

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 488533	A2	19920603	EP 1991-310079	19911031
	EP 488533	A3	19920805		
	R: FR, GB				
	JP 04202406	A2	19920723	JP 1990-330097	19901130
PRAI	JP 1990-330097		19901130		
OS	MARPAT 117:192549				
AB	The title catalysts contain a solid component comprising magnesium, titanium, and halogen and an aluminum alkyl- hindered phenol reaction product, and C ₂ H ₄ is polymd. (optionally with C>2 .alpha.-olefins) at temp. .gtoreq.125.degree. and pressure .gtoreq. 200 kg/cm ² . Undesirable hydrogenation of C ₂ H ₄ is avoided with the process.				
ST	aluminum alkyl reaction product catalyst; hindered phenol reaction product catalyst; catalyst polymn magnesium titanium halogen				
IT	Polymerization catalysts (magnesium-titanium-halogen contg. aluminum alkyl- hindered phenol reaction products, for ethylene)				

- IT **Phenols**, compounds
 RL: USES (Uses)
 (hindered, reaction products, with aluminum alkyls, catalysts, for ethylene polymn.)
- IT Alkenes, polymers
 RL: PREP (Preparation)
 (polymers, prepn. of, catalysts for)
- IT 75-24-1D, Trimethyl aluminum, reaction products with **hindered phenols** 78-10-4, Tetraethoxysilane 85-60-9D, reaction products with aluminum alkyls 88-24-4D, reaction products with aluminum alkyls **88-58-4D**, reaction products with aluminum alkyls 96-69-5D, reaction products with aluminum alkyls 97-93-8D, Triethyl aluminum, reaction products with **hindered phenols** 102-67-0D, Tripropyl aluminum, reaction products with **hindered phenols** 118-82-1D, reaction products with aluminum alkyls 119-47-1D, reaction products with aluminum alkyls 128-37-0D, reaction products with aluminum alkyls 128-39-2D, reaction products with aluminum alkyls 693-04-9, Butylmagnesium chloride 1070-00-4D, Trioctyl aluminum, reaction products with **hindered phenols** 1116-70-7D, Tributyl aluminum, reaction products with **hindered phenols** 1116-73-0D, Trihexyl aluminum, reaction products with **hindered phenols** 1185-55-3, Methyltrimethoxysilane 1264-44-4D, reaction products with aluminum alkyls 1709-70-2D, reaction products with aluminum alkyls 1843-03-4D, reaction products with aluminum alkyls 7446-70-0, Aluminum chloride, uses 7550-45-0, Titanium tetrachloride, uses 25013-16-5D, reaction products with aluminum alkyls
 RL: CAT (Catalyst use); USES (Uses)
 (catalysts, for polymn. of ethylene)
- IT 9002-88-4P, Polyethylene 9010-79-1P, Ethylene-propene copolymer 25087-34-7P, 1-Butene-ethylene copolymer 25213-02-9P, Ethylene-1-hexene copolymer 25213-96-1P, Ethylene-4-methyl-1-pentene copolymer 26221-73-8P, Ethylene-1-octene copolymer
 RL: PREP (Preparation)
 (prepn. of, catalysts for)
- IT **88-58-4D**, reaction products with aluminum alkyls
 RL: CAT (Catalyst use); USES (Uses)
 (catalysts, for polymn. of ethylene)
- RN 88-58-4 HCAPLUS
- CN 1,4-Benzenediol, 2,5-bis(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



- L44 ANSWER 42 OF 57 HCAPLUS COPYRIGHT 2003 ACS
- AN 1992:491498 HCAPLUS
- DN 117:91498
- TI Antioxidant-containing hydrophilic urethane polymer, dry cleaning solvent-resistant, waterproof moisture-permeable material containing the polymer, and method of making the same
- IN Burleigh, Malcolm B.; Mader, Roger A.
- PA Minnesota Mining and Mfg. Co., USA
- SO Eur. Pat. Appl., 21 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C08G018-32

ICS C08G018-66; D06M015-568; D06N003-14; B32B027-40

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 463835	A2	19920102	EP 1991-305674	19910624
	EP 463835	A3	19920902		
	EP 463835	B1	19960207		
	R: AT, CH, DE, FR, GB, IT, LI				
	US 5173300	A	19921222	US 1990-546260	19900628
	AT 133974	E	19960215	AT 1991-305674	19910624
	US 5326847	A	19940705	US 1992-993293	19921218
PRAI	US 1990-546260		19900628		

AB The title polyurethane is adducted with 0.1-10% **hindered phenolic** antioxidant to prevent degrdn. catalyzed by human perspiration salts. A laminate or unitary sheet is formed from microporous matrix having pores or continuous holes through its thickness filled with the title polyurethane permitting moisture vapor transmission. Thus, porous polyethylene membrane was coated with a soln. contg. Pluronic 10R5 950, Desmodur N 210, MEK 950, and reaction product of Irganox 1010 with pentaerythritol (in 50% MEK) 24 g, then coated with a urethane catalyst soln., and dried in three ovens to give membrane wt. wt. 21 g/m². A coated membrane-nylon fabric laminate showed no change when treated with 5% NaCl in 20% EtOH/H₂O mixt. and heated at 115.degree. for 15 min.

ST polyurethane antioxidant adduct membrane; **hindered phenol** pentaerythritol adduct; solvent resistance membrane laminate; nylon coated membrane laminate; waterproof vapor permeable laminate; oxidn resistance hydrophilic polyurethane adduct

IT Membranes

(contg. adducts of **hindered phenolic** antioxidant and polyurethanes, dry cleaning solvent-resistant, waterproof moisture-permeable)

IT Antioxidants

(functional **hindered phenols**, adducts with polyurethanes, for dry cleaning solvent-resistant, waterproof moisture-permeable materials)

IT Water-resistant materials

(laminated porous membranes contg. polyurethane-antioxidant adducts, dry cleaning solvent-resistant moisture-permeable)

IT Polyamides, uses

RL: USES (Uses)

(laminates with porous membranes, contg. polyurethane-antioxidant adducts, for dry cleaning solvent-resistant, waterproof moisture-permeable materials)

IT **Phenols**, compounds

RL: USES (Uses)

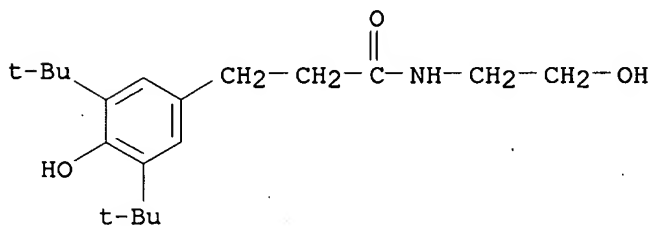
(**hindered**, reaction products, with polyurethanes, for use in dry cleaning solvent-resistant, waterproof moisture-permeable materials)

IT Urethane polymers, compounds

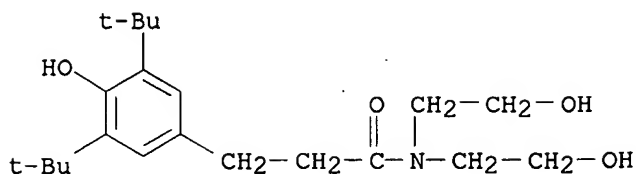
RL: USES (Uses)

(polyoxyalkylene-, reaction products with antioxidants, for dry cleaning solvent-resistant, waterproof moisture-permeable materials)

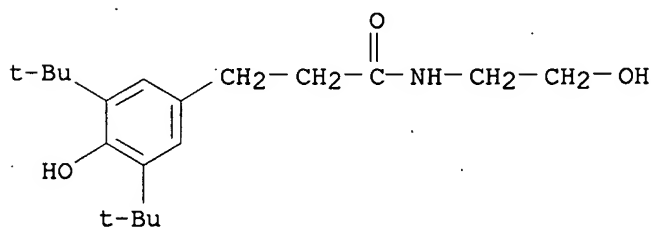
- IT **40388-53-2D**, reaction products with polyols
 RL: USES (Uses)
 (coatings, for membranes for dry cleaning solvent-resistant, waterproof moisture-permeable materials)
- IT 39444-87-6D, reaction products with polyols 83215-43-4D, reaction products with polyols 101482-74-0D, reaction products with polyols 116236-05-6D, reaction products with polyols
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings, for membranes for dry cleaning solvent-resistant, waterproof moisture-permeable materials)
- IT 115-77-5D, Pentaerythritol, reaction products with **hindered phenols** and polyurethanes 6683-19-8D, Irganox 1010, reaction products with pentaerythritol and polyurethanes
 RL: USES (Uses)
 (porous membranes coated with, for moisture-permeable materials)
- IT 9002-88-4, Polyethylene
 RL: USES (Uses)
 (porous membranes, contg. polyurethane-antioxidant adducts, for dry cleaning solvent-resistant, waterproof moisture-permeable materials)
- IT **23328-82-7P 40388-53-2P**
 RL: RCT (Reactant); **SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)**
 (prepn. and reaction of, with polyurethanes, for moisture-permeable materials)
- IT **20170-32-5**, 3-(3,5-Di-tert-butyl-4-hydroxyphenyl)propionic acid
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with (di)ethanolamine, for moisture-permeable materials)
- IT 111-42-2, Diethanolamine, reactions 141-43-5, Ethanolamine, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with **hindered phenols**, for moisture-permeable materials)
- IT **40388-53-2D**, reaction products with polyols
 RL: USES (Uses)
 (coatings, for membranes for dry cleaning solvent-resistant, waterproof moisture-permeable materials)
- RN 40388-53-2 HCAPLUS
- CN Benzenepropanamide, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-N-(2-hydroxyethyl)- (9CI) (CA INDEX NAME)



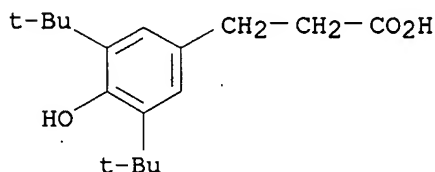
- IT **23328-82-7P 40388-53-2P**
 RL: RCT (Reactant); **SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)**
 (prepn. and reaction of, with polyurethanes, for moisture-permeable materials)
- RN 23328-82-7 HCAPLUS
- CN Benzenepropanamide, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-N,N-bis(2-hydroxyethyl)- (9CI) (CA INDEX NAME)



RN 40388-53-2 HCAPLUS
 CN Benzenepropanamide, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-N-(2-hydroxyethyl)- (9CI) (CA INDEX NAME)



IT 20170-32-5, 3-(3,5-Di-tert-butyl-4-hydroxyphenyl)propionic acid
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with (di)ethanolamine, for moisture-permeable materials)
 RN 20170-32-5 HCAPLUS
 CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy- (9CI) (CA INDEX NAME)

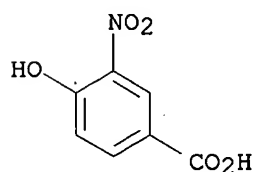


L44 ANSWER 43 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1992:470462 HCAPLUS
 DN 117:70462
 TI Amphiphilic gels for peptide synthesis
 AU Arshady, Reza; Fallah, Fereidoon
 CS Dep. Chem., Imp. Coll. Sci., Technol. Med., London, SW7 2AY, UK
 SO Journal of Polymer Science, Part A: Polymer Chemistry (1992), 30(8), 1705-16
 CODEN: JPACEC; ISSN: 0887-624X
 DT Journal
 LA English
 CC 35-8 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 34
 AB A new class of "amphiphilic" copoly(styrene-acrylamides) of potential interest for peptide synthesis is described. As examples of the new polymers, those carrying nitrophenol or piperazine **functionality**

were used for model reactions in peptide synthesis, and were substantially more efficient than similar reagents derived from polystyrene, poly(dimethylacrylamide) or silica gel. Due to their amphiphilic structure, the new resins have general substrate **compatibility** and are permeated by all the commonly used solvents, including PhMe, EtOAc, DMF, DMSO, and water. The improved performance of the new polymers is attributed to their alternating amphiphilic structure and favorable polymer-solvent-substrate interactions.

- ST amphiphilic polymer peptide synthesis; styrene copolymer peptide synthesis; acrylamide copolymer peptide synthesis
- IT Polymer morphology
(of amphiphilic trichlorophenyl acrylate copolymers for peptide synthesis)
- IT Peptides, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, amphiphilic trichlorophenyl acrylate copolymers for)
- IT 56-40-6DP, Glycine, esters with hydroxynitrobenzamide derivs. of trichlorophenyl acrylate copolymers 56-41-7DP, Alanine, esters with hydroxynitrobenzamide derivs. of trichlorophenyl acrylate copolymers 61-90-5DP, Leucine, esters with hydroxynitrobenzamide derivs. of trichlorophenyl acrylate copolymers 100-02-7DP, reaction products with trichlorophenyl acrylate copolymers 112-24-3DP, Triethylenetetramine, reaction products with trichlorophenyl acrylate copolymers 124-40-3DP, Dimethylamine, reaction products with trichlorophenyl acrylate copolymers 616-82-0DP, 4-Hydroxy-3-nitrobenzoic acid, reaction products with amine derivs. of trichlorophenyl acrylate copolymers 6291-84-5DP, N-Methyl,1,3-propanediamine, reaction products with trichlorophenyl acrylate copolymers 7144-05-0DP, 4-Aminomethylpiperidine, reaction products with trichlorophenyl acrylate copolymers 80006-81-1DP, Divinylbenzene-styrene-2,4,5-trichlorophenyl acrylate copolymer, reaction products with amines 80011-77-4DP, reaction products with amines 84358-13-4DP, reaction products with trichlorophenyl acrylate copolymers
RL: SPN (Synthetic preparation); PREP (Preparation)
(amphiphilic, prepn. of, for synthesis of peptides)
- IT 56-41-7, Alanine, reactions 71952-97-1 129460-20-4 142627-94-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(deblocking of, amphiphilic trichlorophenyl acrylate copolymers for)
- IT 95-95-4, 2,4,5-Trichlorophenol
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification of, with acryloyl chloride)
- IT 40952-23-6P, 2,4,5-Trichlorophenyl acrylate 76245-67-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and polymn. of)
- IT 84358-13-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with amine derivs. of trichlorophenyl acrylate copolymers)
- IT 80006-81-1P, Divinylbenzene-styrene-2,4,5-trichlorophenyl acrylate copolymer 80011-77-4P 142675-20-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with amines)
- IT 140-31-8DP, 1-(2-Aminoethyl)piperazine, reaction products with dimethylacrylamide-ethylene diacrylate-Me acrylate copolymer 124022-81-7DP, reaction products with (aminoethyl)piperazine
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of, for deblocking of amino acids)
 IT 498-94-2, Piperidine-4-carboxylic acid
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with di-tert-Bu dicarbonate)
 IT 24424-99-5, Di-tert-butyl dicarbonate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with piperidinecarboxylic acid)
 IT **616-82-ODP**, 4-Hydroxy-3-nitrobenzoic acid, reaction products with
 amine derivs. of trichlorophenyl acrylate copolymers
 RL: **SPN (Synthetic preparation); PREP (Preparation)**
 (amphiphilic, prepn. of, for synthesis of peptides)
 RN 616-82-0 HCAPLUS
 CN Benzoic acid, 4-hydroxy-3-nitro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

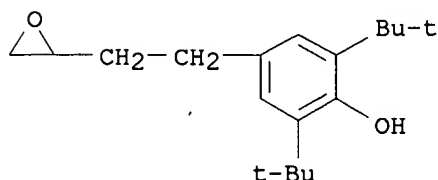


L44 ANSWER 44 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1992:7187 HCAPLUS
 DN 116:7187
 TI Ionic conductivity of poly(ethylene oxide) bound with a **sterically hindered phenolate**
 AU Okamoto, Y.; Foo, C.; Skotheim, T.
 CS Dep. Chem., Polytech. Univ., Brooklyn, NY, 11201, USA
 SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1991), 32(3), 318-19
 CODEN: ACPPAY; ISSN: 0032-3934
 DT Journal
 LA English
 CC 36-5 (Physical Properties of Synthetic High **Polymers**)
 Section cross-reference(s): 76
 AB The conduction of Li and K complexes of 4-(3,4-epoxybutyl)-2,6-di-tert-butylphenol-ethylene oxide copolymer were very low (10⁻⁸ and 10⁻⁶ S/cm, resp.) due to the small local segmental movement of the chains.
 ST ionic cond epoxybutyldibutylphenol copolymer complex; segmental movement polyoxyalkylene cond
 IT Polyoxyalkylenes, properties
 RL: PRP (Properties)
 (elec. cond. of, local segmental movement in relation to)
 IT Chains, chemical
 (local segmental motion of, of polyoxyalkylene complexes, elec. cond. in relation to)
 IT Electric conductivity and conduction
 (ionic, of polyoxyalkylene complexes, local segmental movement in relation to)
 IT 7439-93-2D, Lithium, complexes with ethylene oxide-epoxybutyl bis(tert-butyl)phenol copolymers 7440-09-7D, Potassium, complexes with ethylene oxide-epoxybutyl bis(tert-butyl)phenol copolymers
138007-99-5D, potassium and lithium complexes
 RL: PRP (Properties)
 (elec. cond. of, local segmental movement in relation to)

IT **138007-99-5D**, potassium and lithium complexes
 RL: PRP (Properties)
 (elec. cond. of, local segmental movement in relation to)
 RN 138007-99-5 HCAPLUS
 CN Phenol, 2,6-bis(1,1-dimethylethyl)-4-(2-oxiranylethyl)-, polymer with
 oxirane (9CI) (CA INDEX NAME)

CM 1

CRN 138007-98-4
 CMF C18 H28 O2



CM 2

CRN 75-21-8
 CMF C2 H4 O



L44 ANSWER 45 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1991:560191 HCAPLUS
 DN 115:160191
 TI Static SIMS characterization of a styrene/p-hydroxystyrene copolymer series.
 AU Chilkoti, Ashutosh; Castner, David G.; Ratner, Buddy D.; Briggs, David
 CS Surface Anal. Cent. Biomed. Probl., Univ. Washington, Seattle, WA, 98195, USA
 SO Second. Ion Mass Spectrom., SIMS 7, Proc. Int. Conf., 7th (1990), Meeting Date 1989, 769-72. Editor(s): Benninghoven, Alfred. Publisher: Wiley, Chichester, UK.
 CODEN: 57FUAT
 DT Conference
 LA English
 CC 36-4 (Physical Properties of Synthetic High **Polymers**)
 AB The SIMS spectra of poly(p-hydroxystyrene) (I) and polystyrene are compared and the graded nature of a styrene-p-hydroxystyrene copolymer series is used to evaluate static SIMS as a quant. technique. XPS anal. confirmed that the phenol group in I was derivatized by trifluoroacetic anhydride (II), even though in styrene (III)-rich copolymers smaller amts. of F were detected than would be predicted from their surface O content. This was tentatively attributed to the inaccessibility of the hydroxystyrene units, which, coupled with the lack of chain mobility exhibited by III polymers, **sterically hindered** the reaction of phenol groups with II. Static SIMS anal. of II-derivatized copolymer surfaces

can enhance the ability of static SIMS to clarify the structure of ill-defined polymer surfaces created by plasma treatments and depositions.

ST polystyrene polyhydroxystyrene SIMS spectra; surface analysis polymer SIMS; styrene copolymer static SIMS; hydroxystyrene copolymer static SIMS

IT Surface analysis
(of plasma-modified polymers, by static SIMS)

IT Plasma, chemical and physical effects
(polymer surface modification by, static SIMS in anal. of)

IT Mass spectroscopy
(secondary-ion, static, in anal. of polymers)

IT 407-25-0D, Trifluoroacetic anhydride, reaction products with hydroxystyrene polymers **24979-70-2D**, Poly(p-hydroxystyrene), trifluoroacetic acid derivs. **24979-74-6D**, p-Hydroxystyrene-styrene copolymer, trifluoroacetic acid derivs.
RL: PROC (Process)
(static SIMS anal. of, for surface structure studies)

IT **24979-70-2**, Poly(p-hydroxystyrene) **24979-74-6**, p-Hydroxystyrene-styrene copolymer
RL: PROC (Process)
(static SIMS in anal. of)

IT 9003-53-6, Polystyrene
RL: PRP (Properties)
(static SIMS spectra of, hydroxystyrene polymer spectra in relation to)

IT **24979-70-2D**, Poly(p-hydroxystyrene), trifluoroacetic acid derivs. **24979-74-6D**, p-Hydroxystyrene-styrene copolymer, trifluoroacetic acid derivs.
RL: PROC (Process)
(static SIMS anal. of, for surface structure studies)

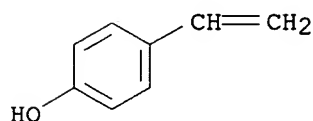
RN 24979-70-2 HCAPLUS

CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

CMF C8 H8 O



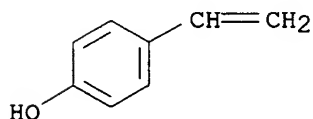
RN 24979-74-6 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

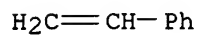
CMF C8 H8 O



CM 2

CRN 100-42-5

CMF C8 H8



IT 24979-70-2, Poly(p-hydroxystyrene) 24979-74-6,
p-Hydroxystyrene-styrene copolymer

RL: PROC (Process)

(static SIMS in anal. of)

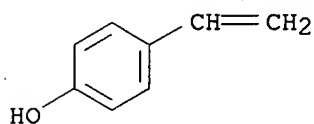
RN 24979-70-2 HCAPLUS

CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

CMF C8 H8 O



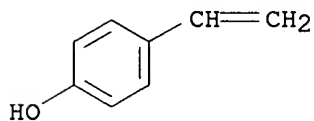
RN 24979-74-6 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

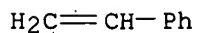
CMF C8 H8 O



CM 2

CRN 100-42-5

CMF C8 H8



L44 ANSWER 46 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 1990:180185 HCAPLUS

DN 112:180185

TI Siloxanes with pendant **sterically hindered phenol** groups
 IN Foster, George N.; Petty, Herbert E.; Blevins, Charles H., II
 PA Union Carbide Chemicals and Plastics Co., Inc., USA
 SO U.S., 5 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC ICM C07F007-08
 NCL 556439000
 CC 35-8 (Chemistry of Synthetic High **Polymers**)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4879378	A	19891107	US 1989-330811	19890330
	AU 8941360	A1	19901004	AU 1989-41360	19890914
	AU 620441	B2	19920220		
	JP 02261823	A2	19901024	JP 1989-237440	19890914
	JP 05083569	B4	19931126		
	NO 8903696	A	19901001	NO 1989-3696	19890915
	EP 393239	A2	19901024	EP 1989-117131	19890915
	EP 393239	A3	19910717		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	HU 53383	A2	19901028	HU 1989-4844	19890915
	CA 1334315	A1	19950207	CA 1989-611627	19890915
PRAI	US 1989-330811		19890330		

AB The title siloxanes, with good resistance to oxidn., heat, etc. and having the structure RX_xX_1yR [$R = R_2R_2SiO_{1/2}$ ($R_1 = Ph, alkyl; R_2 = Ph, alkyl, alkoxy$); $X = R_1R_2SiO$; $X_1 = R_3R_4SiO$ ($R_3 = Ph, phenethyl, alkyl; R_4 = (CH_2)_nCO_2(CH_2)_mR_5$ ($R_5 = 4\text{-hydroxy-3,5-di-tert-butylphenyl}$; $n = 0\text{-}10$; $m = 2\text{-}10$; $x = 0\text{-}250$; $y = 4\text{-}250$) are prepd. Thus, refluxing 3-hydroxypropyl Me siloxane (d.p. 20) with Me 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propanoate and (iso-PrO)₄Ti in PhMe for 4 h gave the corresponding siloxane ester.

ST siloxane **hindered phenol** deriv; hydroxypropyl silane esterification; hydroxyphenylpropionate hindered ester siloxane

IT Antioxidants

(**hindered phenols**, chem. bonded, for siloxanes)

IT Siloxanes and Silicones, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

([(di-tert-butylhydroxyphenyl)alkylcarbonyl]oxy]alkyl Me, di-Me, reaction of, with dibutylhydroxybenzyl alc.)

IT Siloxanes and Silicones, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(hydroxypropyl Me, reaction of, with Me (dibutylhydroxyphenyl)propanoate)

IT Siloxanes and Silicones, preparation

RL: PREP (Preparation)

(phenolic, oxidn.-resistant, manuf. of, with hindered groups)

IT Phenolic resins, preparation

RL: PREP (Preparation)

(siloxane-, oxidn.-resistant, manuf. of, with hindered groups)

IT **88-26-6DP**, esters with carboxyalkyl siloxanes **20170-32-5DP**, esters with hydroxyalkyl siloxanes

RL: **PREP (Preparation)**

(oxidn.-resistant, manuf. of)

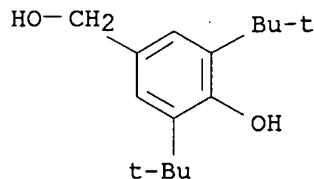
IT **88-26-6DP**, esters with carboxyalkyl siloxanes **20170-32-5DP**, esters with hydroxyalkyl siloxanes

RL: **PREP (Preparation)**

(oxidn.-resistant, manuf. of)

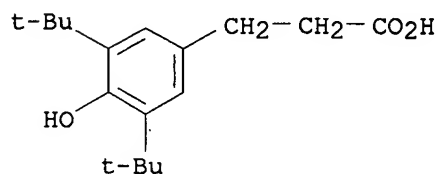
RN 88-26-6 HCAPLUS

CN Benzenemethanol, 3,5-bis(1,1-dimethylethyl)-4-hydroxy- (9CI) (CA INDEX NAME)



RN 20170-32-5 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy- (9CI) (CA INDEX NAME)



L44 ANSWER 47 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 1989:555381 HCAPLUS

DN 111:155381

TI Biocidal resin composition

IN Niira, Reiji; Yamamoto, Tatsuo; Uchida, Masashi; Fukuoka, Yushihiro

PA Shinagawa Fuel Co., Ltd., Japan; Shinanen New Ceramic Corp.

SO Eur. Pat. Appl., 18 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM A01N025-10

ICS A01N059-16; A01N059-20

CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 288063	A2	19881026	EP 1988-106417	19880421
	EP 288063	A3	19900523		
	EP 288063	B1	19930127		
	R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
	JP 63265958	A2	19881102	JP 1987-99219	19870422
	JP 05080954	B4	19931110		
	CA 1308658	A1	19921013	CA 1988-564315	19880415
	US 4938955	A	19900703	US 1988-183000	19880418
	AU 8815008	A1	19881027	AU 1988-15008	19880420
	AU 602572	B2	19901018		
	AT 84936	E	19930215	AT 1988-106417	19880421
	ES 2053610	T3	19940801	ES 1988-106417	19880421
PRAI	JP 1987-99219		19870422		
	EP 1988-106417		19880421		

- AB The title compns. contain zeolites at least partially exchanged with NH₄⁺ ions and biocidal metal ions, resins, and discoloration inhibitors. An biocidal resin was prepd. by injection molding a mixt. of zeolite A contg. NH₄⁺ 1.3, Ag 2.9, and Zn 5.4% 1, 2-(3,5-di-tert-amyl-2-hydroxyphenyl)benzotriazole discoloration inhibitor 0.5, and polystyrene 100 parts. The compn. was biocidal to bacteria, yeast, and fungi, and underwent almost no discoloration on exposure to sunlight for up to 60 days.
- ST biocide resin compn; zeolite biocide resin; silver zeolite biocide resin; zinc zeolite biocide resin; polystyrene blend zeolite biocide; discoloration inhibitor biocidal resin; benzotriazole deriv discoloration inhibitor
- IT Fluoropolymers
RL: USES (Uses)
(biocidal zeolite salts mixed with)
- IT Acrylic polymers, uses and miscellaneous
Epoxy resins, uses and miscellaneous
Phenolic resins, uses and miscellaneous
Plastics
Polyamides, uses and miscellaneous
Polycarbonates, uses and miscellaneous
Polyesters, uses and miscellaneous
Polyoxymethylenes, uses and miscellaneous
Rayon, uses and miscellaneous
Rubber, natural, uses and miscellaneous
Rubber, synthetic
Rubber, urethane, uses and miscellaneous
Urethane polymers, uses and miscellaneous
RL: USES (Uses)
(blends with biocidal zeolite salts)
- IT Bactericides, Disinfectants, and Antiseptics
Fungicides and Fungistats
(zeolite metal salts and plastics as)
- IT Zeolites, uses and miscellaneous
RL: USES (Uses)
(A, cation-exchanged, biocides, in plastic blends)
- IT Zeolites, uses and miscellaneous
RL: USES (Uses)
(T, cation-exchanged, biocides, in plastic blends)
- IT Zeolites, uses and miscellaneous
RL: USES (Uses)
(X, cation-exchanged, biocides, in plastic blends)
- IT Zeolites, uses and miscellaneous
RL: USES (Uses)
(Y, cation-exchanged, biocides, in plastic blends)
- IT Discoloration prevention
(agents, **hindered phenols** and amines,
benzotriazoles and oxanilides, for biocidal zeolite-plastic blends)
- IT Zeolites, uses and miscellaneous
(analcite-type, cation-exchanged, biocides, in plastic blends)
- IT Zeolites, uses and miscellaneous
RL: USES (Uses)
(cation-exchanged, biocides, in plastic blends)
- IT Zeolites, uses and miscellaneous
RL: USES (Uses)
(chabazite-type, cation-exchanged, biocides, in plastic blends)
- IT Zeolites, uses and miscellaneous
RL: USES (Uses)

- (clinoptilolite, cation-exchanged, biocides, in plastic blends)
- IT Zeolites, uses and miscellaneous
RL: USES (Uses)
(erionite-type, cation-exchanged, biocides, in plastic blends)
- IT Amines, uses and miscellaneous
Phenols, uses and miscellaneous
RL: USES (Uses)
(**hindered**, discoloration inhibitor, for biocidal zeolite-plastic blends)
- IT Zeolites, uses and miscellaneous
RL: USES (Uses)
(mordenite-type, cation-exchanged, biocides, in plastic blends)
- IT Zeolites, uses and miscellaneous
RL: USES (Uses)
(sodalite-type, cation-exchanged, biocides, in plastic blends)
- IT Polyesters, uses and miscellaneous
RL: USES (Uses)
(unsatd., blends with biocidal zeolite salts)
- IT 7439-92-1D, Lead, zeolite salts 7439-97-6D, Mercury, zeolite salts
7440-22-4D, Silver, zeolite salts 7440-28-0D, Thallium, zeolite salts
7440-31-5D, Tin, zeolite salts 7440-43-9D, Cadmium, zeolite salts
7440-47-3D, Chromium, zeolite salts 7440-50-8D, Copper, zeolite salts
7440-66-6D, Zinc, zeolite salts 7440-69-9D, Bismuth, zeolite salts
14798-03-9D, Ammonium, zeolite salts
RL: USES (Uses)
(biocides, in resin blends)
- IT 9002-85-1, Polyvinylidene chloride 9002-86-2, Polyvinyl chloride
9002-88-4, Polyethylene 9002-89-5, Polyvinyl alcohol 9003-07-0,
Polypropylene 9003-53-6, Polystyrene 9003-56-9, ABS copolymer
24937-78-8, EVA copolymer
RL: USES (Uses)
(blends with biocidal zeolite salts)
- IT **69-72-7D**, derivs. 119-61-9D, Benzophenone, derivs. 302-01-2D,
Hydrazine, derivs. 2082-79-3 15802-18-3D, Cyanoacrylic acid, derivs.
25973-55-1 32687-78-8 65447-77-0 71878-19-8
RL: USES (Uses)
(discoloration inhibitor, for biocidal zeolite-plastic blends)
- IT 9004-34-6
RL: USES (Uses)
(rayon, blends with biocidal zeolite salts)
- IT 1335-30-4
RL: USES (Uses)
(zeolites, A, cation-exchanged, biocides, in plastic blends)
- IT 1335-30-4
RL: USES (Uses)
(zeolites, T, cation-exchanged, biocides, in plastic blends)
- IT 1335-30-4
RL: USES (Uses)
(zeolites, X, cation-exchanged, biocides, in plastic blends)
- IT 1335-30-4
RL: USES (Uses)
(zeolites, Y, cation-exchanged, biocides, in plastic blends)
- IT 1335-30-4
RL: USES (Uses)
(zeolites, analcite-type, cation-exchanged, biocides, in plastic blends)
- IT 1335-30-4
RL: USES (Uses)

(zeolites, cation-exchanged, biocides, in plastic blends)

IT 1335-30-4
RL: USES (Uses)
(zeolites, chabazite-type, cation-exchanged, biocides, in plastic blends)

IT 1335-30-4
RL: USES (Uses)
(zeolites, clinoptilolite, cation-exchanged, biocides, in plastic blends)

IT 1335-30-4
RL: USES (Uses)
(zeolites, erionite-type, cation-exchanged, biocides, in plastic blends)

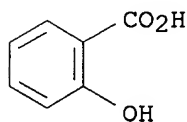
IT 1335-30-4
RL: USES (Uses)
(zeolites, mordenite-type, cation-exchanged, biocides, in plastic blends)

IT 1335-30-4
RL: USES (Uses)
(zeolites, sodalite-type, cation-exchanged, biocides, in plastic blends)

IT 69-72-7D, derivs.
RL: USES (Uses)
(discoloration inhibitor, for biocidal zeolite-plastic blends)

RN 69-72-7 HCAPLUS

CN Benzoic acid, 2-hydroxy- (9CI) (CA INDEX NAME)



L44 ANSWER 48 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 1988:438814 HCAPLUS

DN 109:38814

TI Stabilization of polyurethane systems against photooxidative influences

AU Stohler, Felix R.; Berger, Kurt

CS CIBA-GEIGY Ltd., Basel, CH-4002, Switz.

SO Angewandte Makromolekulare Chemie (1988), 158-159, 233-46
CODEN: ANMCBO; ISSN: 0003-3146

DT Journal

LA German

CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 42

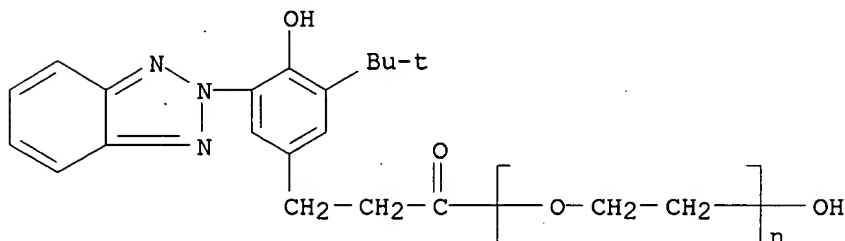
AB The stabilization of polyurethane coatings and foams and thermoplastics by hindered amine light stabilizers, UV absorbers, phenolic antioxidants, and phosphonites was studied. The piperidine deriv. light stabilizers had the greatest effect.

ST polyurethane light stabilization; photooxidative stabilizer hindered amine polyurethane

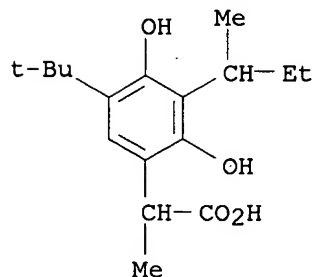
IT Light stabilizers
(hindered amines, systems contg., evaluation of, for polyurethanes)

IT Antioxidants
(hindered phenols, light stabilizer systems contg., evaluation of, for polyurethanes)

- IT Urethane polymers, uses and miscellaneous
RL: USES (Uses)
(light stabilizer systems for, evaluation of)
- IT Coating materials
(polyurethanes, light stabilizer systems for, evaluation of)
- IT Urethane polymers, uses and miscellaneous
RL: USES (Uses)
(polyester-, light stabilizer systems for, evaluation of)
- IT Urethane polymers, uses and miscellaneous
RL: USES (Uses)
(polyether-, light stabilizer systems for, evaluation of)
- IT Shoes
(soles, polyurethane compns. for, light stabilization of, systems for)
- IT 6683-19-8 36443-68-2 68407-88-5
RL: USES (Uses)
(light stabilizer compns. contg., for polyurethanes)
- IT 2440-22-4, 2-(2-Hydroxy-5-methylphenyl)benzotriazole 25973-55-1
41556-26-7, Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate 52829-07-9
104810-47-1 **104810-48-2** 115111-09-6 **115235-92-2D**,
esters
RL: USES (Uses)
(light stabilizers, for polyurethanes)
- IT **104810-48-2 115235-92-2D**, esters
RL: USES (Uses)
(light stabilizers, for polyurethanes)
- RN 104810-48-2 HCAPLUS
- CN Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy- (9CI) (CA INDEX NAME)



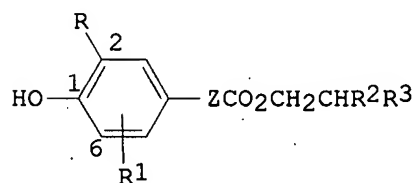
- RN 115235-92-2 HCAPLUS
- CN Benzeneacetic acid, 5-(1,1-dimethylethyl)-2,4-dihydroxy-.alpha.-methyl-3-(1-methylpropyl)- (9CI) (CA INDEX NAME)



L44 ANSWER 49 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1987:197324 HCAPLUS
 DN 106:197324
 TI Antioxidants
 IN Akutsu, Mitsuo; Haruna, Toru; Nishimura, Jun; Takahashi, Hiroshi; Inochi, Kazuhito
 PA Adeka Argus Chemical Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C09K015-08
 ICS C09K015-14
 ICA C08K005-13; C08K005-36; C10M129-76; C10M135-26; C11B005-00
 ICI C10N030-10
 CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): 39, 51

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61148287	A2	19860705	JP 1984-270171	19841221
	JP 04064555	B4	19921015		
PRAI	JP 1984-270171		19841221		
GI					



AB The phenols I (R = C4-8 tert-alkyl; R1 = H, C1-8 alkyl; R2 = C12-13 alkyl; R3 = C10-11 alkyl; Z = C2H4, CH2SCH2) are antioxidants for polymers, rubbers, oils, waxes, etc. Thus, polypropylene contg. Ca stearate 0.05, dilauryl thiodipropionate 0.2, and I (R = CMe3, R1 = 6-CMe3 R2 = C12H25, R3 = C10H21, Z = C2H4) 0.1 part showed no change in 708 h at 150.degree. or 306 h at 160.degree., vs. 258 and 42 resp., with BHT in place of I.

ST antioxidant **hindered phenol** ester; polypropylene antioxidant phenolic ester; hydroxyphenylpropionate deriv antioxidant

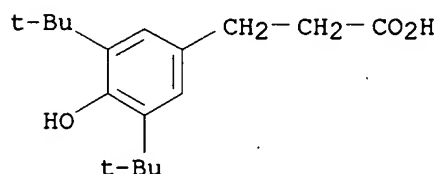
IT Paraffin oils
 Polycarbonates, uses and miscellaneous
 Polymers, uses and miscellaneous
 Polyoxyphenylenes
 Rubber, isoprene, uses and miscellaneous
 RL: USES (Uses)
 (antioxidants for, **hindered phenol** derivs. as)

IT Antioxidants
 (**hindered phenolic** esters, for org. materials)

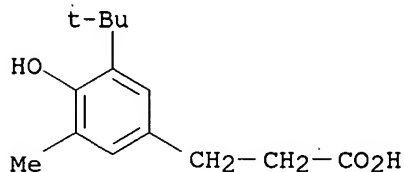
IT Lubricating oil additives
 (antioxidants, **hindered phenolic** esters)

IT 9003-07-0, Polypropylene 24938-67-8 25134-01-4
 RL: USES (Uses)

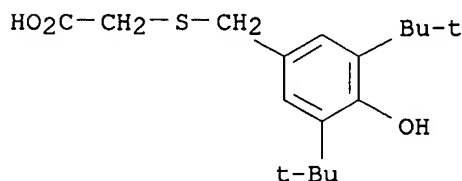
- (antioxidants for, **hindered phenol** derivs. as)
- IT 9003-53-6, Polystyrene 9003-56-9, ABS polymer
RL: PRP (Properties)
- (antioxidants for, **hindered phenol** derivs. as)
- IT 20170-32-5D, ester with C24-26 branched alcs. 24794-55-6D
, ester with C24-26 branched alcs. 80531-35-7D, ester with
C24-26 branched alcs. 107551-66-6 107551-67-7D, ester with
C24-26 branched alcs.
RL: USES (Uses)
- (antioxidants, for org. materials).
- IT 9003-31-0
RL: USES (Uses)
- (rubber, antioxidants for, **hindered phenol** derivs.
as)
- IT 20170-32-5D, ester with C24-26 branched alcs. 24794-55-6D
, ester with C24-26 branched alcs. 80531-35-7D, ester with
C24-26 branched alcs. 107551-67-7D, ester with C24-26 branched
alcs.
RL: USES (Uses)
- (antioxidants, for org. materials)
- RN 20170-32-5 HCAPLUS
- CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy- (9CI) (CA
INDEX NAME)



- RN 24794-55-6 HCAPLUS
- CN Benzenepropanoic acid, 3-(1,1-dimethylethyl)-4-hydroxy-5-methyl- (9CI)
(CA INDEX NAME)

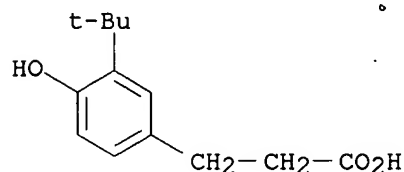


- RN 80531-35-7 HCAPLUS
- CN Acetic acid, [[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]thio]-
(9CI) (CA INDEX NAME)



RN 107551-67-7 HCAPLUS

CN Benzenepropanoic acid, 3-(1,1-dimethylethyl)-4-hydroxy- (9CI) (CA INDEX NAME)



L44 ANSWER 50 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 1986:553606 HCAPLUS

DN 105:153606

TI Functional polymers. XLIII. Olefin copolymers of 2,6-di-tert-butyl-4-vinyl (or 4-isoproprenyl) phenol

AU Grosso, Paul; Vogl, Otto

CS Dep. Polym. Sci. Eng., Univ. Massachusetts, Amherst, MA, 01003, USA

SO Journal of Macromolecular Science, Chemistry (1986), A23(11), 1299-313
CODEN: JMCHBD; ISSN: 0022-233X

DT Journal

LA English

CC 35-4 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 37

AB Polymeric antioxidants were synthesized based on 2,6-di-tert-butyl-4-vinyl (or isopropenyl) phenol. They were prepd. by emulsion copolymerization with 1,3-butadiene or isoprene and had approx. 6-10 mol% of the polymerizable hindered vinyl (or isopropenyl) phenol in the copolymers. The copolymers were catalytically hydrogenated in the presence of sol. Co catalysts to satd. copolymers of ethylene or ethylene/propylene structure. The polymers were not branched and had mol. wts. > 50,000.

ST butylvinylphenol copolymer antioxidant; butylisopropenylphenol copolymer antioxidant; vinyl dibutylphenol copolymer antioxidant; isopropenyldibutylphenol copolymer antioxidant

IT Hydrogenation

(of vinyl- or isopropenyl-contg. phenol copolymers, for antioxidants for polymers)

IT Antioxidants

(polymeric vinyl- or isopropenyl-contg. phenols, for polymers, prepn. of)

IT 86630-72-0DP, hydrogenated 86630-72-0P 99792-08-2P

99792-09-3DP, hydrogenated 99792-09-3P 99792-10-6DP,
hydrogenated 99792-10-6PRL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as antioxidant for polymers)

IT 86630-72-0DP, hydrogenated 86630-72-0P

99792-09-3DP, hydrogenated 99792-09-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as antioxidant for polymers)

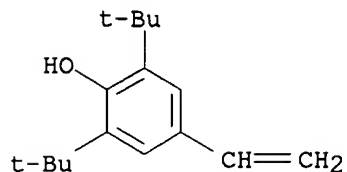
RN 86630-72-0 HCAPLUS

CN Phenol, 2,6-bis(1,1-dimethylethyl)-4-ethenyl-, polymer with 1,3-butadiene (9CI) (CA INDEX NAME)

CM 1

CRN 19263-36-6

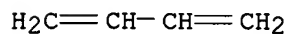
CMF C16 H24 O



CM 2

CRN 106-99-0

CMF C4 H6



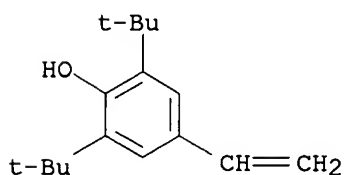
RN 86630-72-0 HCAPLUS

CN Phenol, 2,6-bis(1,1-dimethylethyl)-4-ethenyl-, polymer with 1,3-butadiene (9CI) (CA INDEX NAME)

CM 1

CRN 19263-36-6

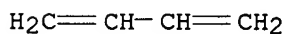
CMF C16 H24 O



CM 2

CRN 106-99-0

CMF C4 H6

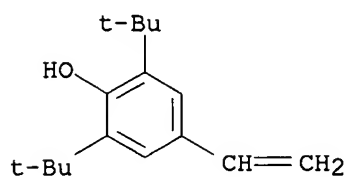


RN 99792-09-3 HCAPLUS

CN Phenol, 2,6-bis(1,1-dimethylethyl)-4-ethenyl-, polymer with 2-methyl-1,3-butadiene (9CI) (CA INDEX NAME)

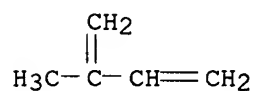
CM 1

CRN 19263-36-6
CMF C16 H24 O



CM 2

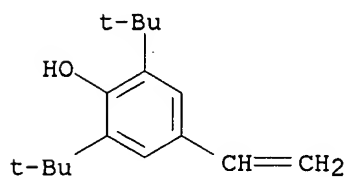
CRN 78-79-5
CMF C5 H8



RN 99792-09-3 HCAPLUS
CN Phenol, 2,6-bis(1,1-dimethylethyl)-4-ethenyl-, polymer with
2-methyl-1,3-butadiene (9CI) (CA INDEX NAME)

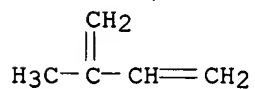
CM 1

CRN 19263-36-6
CMF C16 H24 O



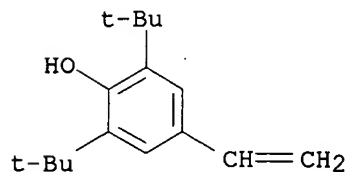
CM 2

CRN 78-79-5
CMF C5 H8



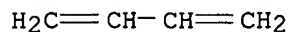
L44 ANSWER 51 OF 57 HCAPLUS COPYRIGHT 2003 ACS
AN 1986:34831 HCAPLUS
DN 104:34831

TI Functional polymers. 44. Polymeric polyolefin antioxidants
 AU Grosso, Paul; Vogl, Otto
 CS Dep. Polym. Sci. Eng., Univ. Massachusetts, Amherst, MA, 01003, USA
 SO Polymer Bulletin (Berlin, Germany) (1985), 14(3-4), 245-50
 CODEN: POBUDR; ISSN: 0170-0839
 DT Journal
 LA English
 CC 37-6 (**Plastics** Manufacture and Processing)
 Section cross-reference(s): 39
 AB Polymeric antioxidants prep'd. from 2,6-di-tert-butyl-4-vinyl- or
 4-isopropenylphenol and butadiene or isoprene, and their hydrogenated
 products (6-8 mol% phenolic antioxidant in the polymer) were tested by
 oxygen-uptake studies for their effectiveness as antioxidants for
 polyolefins and polydienes. The polymeric antioxidants were slightly less
 effective in short-term protection against oxidn. at 150.degree. as
 compared to low-mol.-wt. antioxidants, but more effective in long-term
 protection of the polymer samples at a level of 0.1%.
 ST polymeric phenolic antioxidant; vinylphenol polymer antioxidant
 IT Rubber, butadiene-styrene, uses and miscellaneous
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (polymeric **hindered phenolic** antioxidants for,
 prepn. and effectiveness of)
 IT Antioxidants
 (polymeric, **hindered phenols**, prepn. and
 effectiveness of)
 IT 9002-88-4 9003-07-0 9003-17-2 9003-31-0 25087-34-7
 RL: USES (Uses)
 (polymeric **hindered phenolic** antioxidants for,
 prepn. and effectiveness of)
 IT **86630-72-0DP**, hydrogenated **86630-72-0P** 99792-08-2DP,
 hydrogenated 99792-08-2P **99792-09-3DP**, hydrogenated
99792-09-3P 99792-10-6DP, hydrogenated 99792-10-6P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and antioxidant properties of)
 IT **86630-72-0DP**, hydrogenated **86630-72-0P**
99792-09-3DP, hydrogenated **99792-09-3P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and antioxidant properties of)
 RN 86630-72-0 HCAPLUS
 CN Phenol, 2,6-bis(1,1-dimethylethyl)-4-ethenyl-, polymer with 1,3-butadiene
 (9CI) (CA INDEX NAME)
 CM 1
 CRN 19263-36-6
 CMF C16 H24 O



CM 2

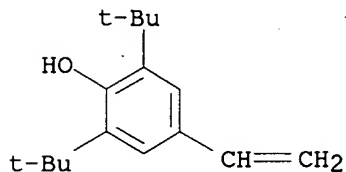
CRN 106-99-0
CMF C4 H6



RN 86630-72-0 HCAPLUS
CN Phenol, 2,6-bis(1,1-dimethylethyl)-4-ethenyl-, polymer with 1,3-butadiene
(9CI) (CA INDEX NAME)

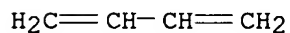
CM 1

CRN 19263-36-6
CMF C16 H24 O



CM 2

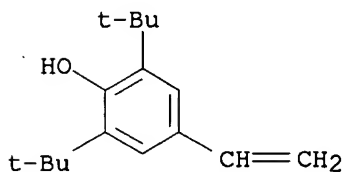
CRN 106-99-0
CMF C4 H6



RN 99792-09-3 HCAPLUS
CN Phenol, 2,6-bis(1,1-dimethylethyl)-4-ethenyl-, polymer with
2-methyl-1,3-butadiene (9CI) (CA INDEX NAME)

CM 1

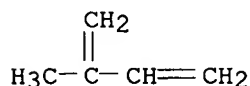
CRN 19263-36-6
CMF C16 H24 O



CM 2

CRN 78-79-5

CMF C5 H8



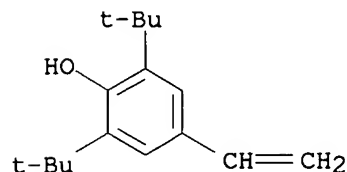
RN 99792-09-3 HCAPLUS

CN Phenol, 2,6-bis(1,1-dimethylethyl)-4-ethenyl-, polymer with 2-methyl-1,3-butadiene (9CI) (CA INDEX NAME)

CM 1

CRN 19263-36-6

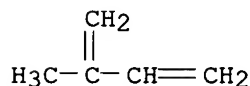
CMF C16 H24 O



CM 2

CRN 78-79-5

CMF C5 H8



L44 ANSWER 52 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 1985:132551 HCAPLUS

DN 102:132551

TI Monomeric antioxidants. A proton NMR spectrometry study of their homopolymerization

AU Munteanu, Dan; Mracec, Mircea; Tincul, Ioan; Csunderlik, Carol

CS Plastics Res. Cent., Chem. Res. Inst., Timisoara, 1900, Rom.

SO Polymer Bulletin (Berlin, Germany) (1985), 13(1), 77-82

CODEN: POBUDR; ISSN: 0170-0839

DT Journal

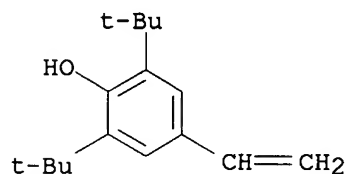
LA English

CC 35-3 (Chemistry of Synthetic High **Polymers**)

AB The polymn. behavior of 3,5-di-tert-butyl-4-hydroxy-benzyl methacrylate (I) [36536-48-8], trans-3,5-di-tert-butyl-4-hydroxycinnamic acid (II) [95602-92-9], 3,5-di-tert-butyl-4-hydroxystyrene (III) [19263-36-6] and N-(3,5-di-tert-butyl-4-hydroxybenzyl)maleimide (IV) [63485-14-3] was investigated. These monomeric antioxidants were polymd. in arom. solvents, in the presence of usual radical initiators, by refluxing under nitrogen. An 1H-NMR spectrometry method for the calcn. of

monomer conversion was developed. The disappearance of the monomer double bond was followed using dibenzyl ether as an internal std. The reactivity of these monomers, all showing the same antioxidant **functionality**, decreased in the order IV > I > III. II did not polymerize.

ST NMR polymn phenolic antioxidant; **hindered phenol**
antioxidant polymn
IT Antioxidants
(**hindered phenols**, polymn. of)
IT Polymerization
(of **hindered phenolic** monomeric antioxidants)
IT 95602-92-9
RL: USES (Uses)
(antioxidants, attempted polymn. of)
IT 36536-48-8
RL: USES (Uses)
(antioxidants, polymn. of)
IT **19263-36-6P** 63485-14-3P
RL: **SPN (Synthetic preparation); PREP (Preparation)**
(antioxidants, prepn. and polymn. of)
IT 128-39-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, chloromethylmaleimide)
IT 7685-96-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with di-tert-butylphenol)
IT **19263-36-6P**
RL: **SPN (Synthetic preparation); PREP (Preparation)**
(antioxidants, prepn. and polymn. of)
RN 19263-36-6 HCAPLUS
CN Phenol, 2,6-bis(1,1-dimethylethyl)-4-ethenyl- (9CI) (CA INDEX NAME)



L44 ANSWER 53 OF 57 HCAPLUS COPYRIGHT 2003 ACS
AN 1981:462876 HCAPLUS
DN 95:62876
TI Compatibility studies of styrene and hydroxyl containing styrene copolymers with poly(ethylene oxide)
AU Ting, S. P.; Bulkin, B. J.; Pearce, E. M.; Kwei, T. K.
CS Polytech. Inst. New York, Brooklyn, NY, 11201, USA
SO Journal of Polymer Science, Polymer Chemistry Edition (1981), 19(6), 1451-73
CODEN: JPLCAT; ISSN: 0449-296X
DT Journal
LA English
CC 35-5 (Synthetic High **Polymers**)
AB Copolymers of styrene with vinylphenyl trifluoromethyl carbinol, p-vinylphenyl trifluoromethyl carbinol, vinylphenyl hexafluorodimethyl carbinol, and p-vinylphenol are conditionally compatible with poly(ethylene oxide) (I) [25322-68-3], depending on their compn. and

blending ratios, whereas copolymers of styrene and vinylphenyl Me carbinol are much less compatible with I, as detd. by glass temp. criteria and differential scanning calorimetry. The crystallinity of I is changed in the copolymer blends, as indicated by depressions of the I m.p. Hydrogen-bond formation has been studied in two selected blends by IR spectroscopy. Hydrogen bonding dissocn. and reassocn. as a function of temp. are reported. The conformation changes of I in the blends, the interaction between copolymer and I as well as in the ref. blend, polystyrene/I, are also investigated.

ST styrene copolymer compatibility polyoxyethylene; hydroxy styrene copolymer compatibility polyoxyethylene; hydrogen bond polyoxyethylene compatibility polystyrene

IT Hydrogen bond

(compatibility of hydroxy group-contg. styrene copolymers and poly(ethylene oxide) in relation to)

IT Chains, chemical

(conformation of, of poly(ethylene oxide), compatibility with hydroxy group-contg. styrene copolymers in relation to)

IT 25322-68-3

RL: USES (Uses)

(compatibility of, with hydroxy group-contg. styrene polymers)

IT 684-16-2D, reaction products with poly(hydroxystyrene), hydrolyzed

9003-53-6D, hydroxy derivs. **24979-70-2D**, reaction products with hexafluoroacetone, hydrolyzed 24979-75-7 74946-53-5 74946-53-5D, hydrogenated

RL: USES (Uses)

(**compatibility** of, with poly(ethylene oxide))

IT 59829-15-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and polymn. of, with styrene)

IT 354-32-5 506-96-7

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with polystyrene)

IT 9003-53-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with trifluoroacetyl chloride)

IT **24979-70-2D**, reaction products with hexafluoroacetone, hydrolyzed

RL: USES (Uses)

(**compatibility** of, with poly(ethylene oxide))

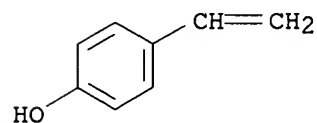
RN 24979-70-2 HCAPLUS

CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

CMF C8 H8 O

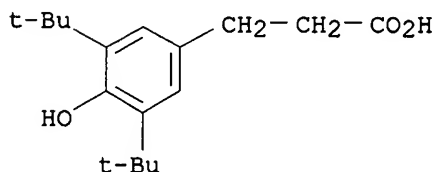


L44 ANSWER 54 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 1981:209652 HCAPLUS

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

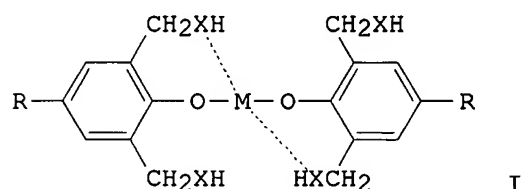
DN 94:209652
 TI Low-pressure and high-pressure polyethylenes as new effective antioxidants cable insulation
 AU Lazareva, N. P.; Makarova, G. P.; Khokhlova, L. L.; Sotnikova, L. K.; Zavitaeva, L. D.; Sokolova, T. G.; Parfenova, D. S.
 CS USSR
 SO Plasticheskie Massy (1981), (3), 47-9
 CODEN: PLMSAI; ISSN: 0554-2901
 DT Journal
 LA Russian
 CC 36-6 (Plastics Manufacture and Processing)
 AB Novel **bisphenol**-based antioxidants with **sterically hindered** OH groups which do not react with residual polymn. catalysts are used for the stabilization of low-d. and high-d. polyethylene (I) [9002-88-4] for insulating cables. I compns. contg. the antioxidants were resistant to coloration due to the presence of sterically hindered OH groups. The service life of I compns. on heating at 100.degree. was 100 and 10,000 h, resp., in the absence and in the presence of AO 40 [1709-70-2] antioxidant. The dielec. loss tangent of I did not change after >25,000 h at 90.degree. in the presence of the examd. antioxidant compared to 80 h for unstabilized I.
 ST bisphenol antioxidant polyethylene; elec insulator polyethylene antioxidant; dielec property polyethylene antioxidant
 IT Antioxidants
 (hindered bisphenols, for polyethylene elec. insulators)
 IT Electric insulators and Dielectrics
 (polyethylene, mech. and dielec. properties of, bisphenol antioxidant effect on)
 IT 77-62-3 93-46-9 96-66-2 1709-70-2 41484-35-9 67894-72-8
 77751-75-8
 RL: USES (Uses)
 (antioxidants, for polyethylene elec. insulators)
 IT 115-77-5D, ester with (di-tert-butylhydroxyphenyl)propanoic acid
 20170-32-5D, ester with pentaerythritol
 RL: USES (Uses)
 (antioxidants, for polyethylene, mech. and dielec. properties in relation to)
 IT 9002-88-4
 RL: USES (Uses)
 (elec. insulators, bisphenol antioxidants for)
 IT **20170-32-5D**, ester with pentaerythritol
 RL: USES (Uses)
 (antioxidants, for polyethylene, mech. and dielec. properties in relation to)
 RN 20170-32-5 HCAPLUS
 CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy- (9CI) (CA INDEX NAME)



L44 ANSWER 55 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1980:495941 HCAPLUS
 DN 93:95941
 TI Nitrile rubber vulcanization mixture
 IN Rakhman, M. Z.; Avrushchenko, B. Kh.; Shvarts, A. G.; Vakorina, M. V.
 PA USSR
 SO U.S.S.R.
 From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1980, (17), 100.
 CODEN: URXXAF
 DT Patent
 LA Russian
 IC C08L009-00; C08K005-05; C08K005-37
 CC 35-9 (Synthetic High **Polymers**)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	SU 732309	T	19800505	SU 1976-2404433	19760917
PRAI	SU 1976-2404433		19760917		

GI



AB A rubber compd. affording vulcanizates with improved heat resistance and fatigue strength comprises nitrile rubber 45-60, vulcanizing materials 4-7, filler 28-40, and, as antifatigue agent and antioxidant, I (R = C1-5 alkyl; X = O, S; M = Cd, Zn) 1-4 wt.%.

ST heat stabilizer nitrile rubber; antioxidant nitrile rubber; stabilizer nitrile rubber; methylolphenol metal complex antioxidant; mercaptomethylphenol metal complex antioxidant; zinc complex **hindered phenol** antioxidant; cadmium complex **hindered phenol** antioxidant

IT Antioxidants
 (**hindered phenol** zinc or cadmium complexes, for nitrile rubber)

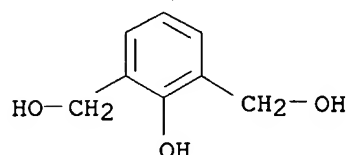
IT Rubber, nitrile, uses and miscellaneous
 RL: USES (Uses)
 (stabilizers for, **hindered phenol** zinc or cadmium complexes as)

IT **2937-59-9D**, 4-alkyl derivs., zinc or cadmium complexes
7440-43-9D, **hindered phenol** complexes **7440-66-6D**, **hindered phenol** complexes **74660-71-2D**, 4-alkyl derivs., zinc or cadmium complexes
 RL: USES (Uses)
 (stabilizers, for nitrile rubber)

IT **2937-59-9D**, 4-alkyl derivs., zinc or cadmium complexes
74660-71-2D, 4-alkyl derivs., zinc or cadmium complexes
 RL: USES (Uses)
 (stabilizers, for nitrile rubber)

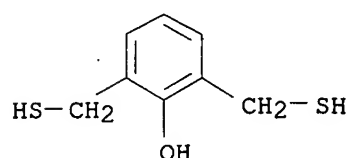
RN 2937-59-9 HCAPLUS

CN 1,3-Benzenedimethanol, 2-hydroxy- (9CI) (CA INDEX NAME)



RN 74660-71-2 HCAPLUS

CN Phenol, 2,6-bis(mercaptomethyl)- (9CI) (CA INDEX NAME)



L44 ANSWER 56 OF 57 HCAPLUS COPYRIGHT 2003 ACS

AN 1979:105013 HCAPLUS

DN 90:105013

TI Organic acid cellulose resin compositions

IN Yabune, Hideo; Nanbu, Masami

PA Daicel Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC C08L001-10

CC 36-6 (Plastics Manufacture and Processing)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 53137255	A2	19781130	JP 1977-51978	19770509
	JP 56045501	B4	19811027		
PRAI	JP 1977-51978		19770509		

AB Org. phosphites such as trisonylphenyl phosphite (I) [26523-78-4] and bisphenol A bis(dipentadecyl phosphite) [68731-79-3] and **hindered phenol**-substituted carboxylic acids such as pentaerythritol tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate] (II) [6683-19-8] and octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate [2082-79-3] are heat stabilizers for cellulose acetate (III) [9004-35-7]. Thus, the d.p. of III contg. di-Et phthalate 40, yellow pigment 0.03, I 0.02, and II 0.2 phr decreased 23% after 10 min. at 210.degree., compared with 52% in the absence of II.

ST cellulose acetate heat stabilizer; phosphite stabilizer cellulose acetate; **phenol hindered** heat stabilizer; hydroxyphenylpropionate heat stabilizer; bisphenol A phosphite heat stabilizer

IT Heat stabilizers
(phosphite esters and **hindered phenolic** esters, for cellulose acetate)

IT **Phenols**, uses and miscellaneous
 RL: MOA (Modifier or additive use); USES (Uses)
 (hindered, heat stabilizers, contg. org. phosphites, for cellulose acetate)

IT 9004-35-7
 RL: USES (Uses)
 (heat stabilizers for, org. phosphites and hindered phenolic esters as)

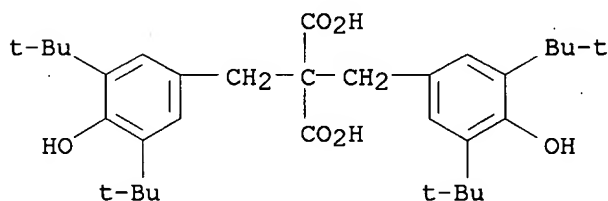
IT 2082-79-3 6683-19-8 15188-12-2 16993-81-0 35455-13-1 41484-35-9
69437-60-1D, esters
 RL: MOA (Modifier or additive use); USES (Uses)
 (heat stabilizers, contg. org. phosphites, for cellulose acetate)

IT 101-02-0 2929-86-4 3287-06-7 26523-78-4 26544-27-4 68731-79-3
 69437-59-8 69439-68-5
 RL: MOA (Modifier or additive use); USES (Uses)
 (heat stabilizers, for cellulose acetate)

IT **69437-60-1D**, esters
 RL: MOA (Modifier or additive use); USES (Uses)
 (heat stabilizers, contg. org. phosphites, for cellulose acetate)

RN 69437-60-1 HCAPLUS

CN Propanedioic acid, bis[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]-
 (9CI) (CA INDEX NAME)



L44 ANSWER 57 OF 57 HCAPLUS COPYRIGHT 2003 ACS
 AN 1978:511242 HCAPLUS
 DN 89:111242
 TI Resins by copolymerization of a hydroxystyrene with a cyclopentadiene or a cyclopentadiene derivative, useful in elastomeric or thermoplastic compositions
 PA Sumitomo Chemical Co., Ltd., Japan
 SO Fr. Demande, 38 pp.
 CODEN: FRXXBL
 DT Patent
 LA French
 IC C08F236-10
 CC 36-3 (Plastics Manufacture and Processing)
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2352842	A1	19771223	FR 1977-16108	19770526
	FR 2352842	B1	19800620		
	JP 52144049	A2	19771201	JP 1976-61614	19760526
	JP 58018938	B4	19830415		
	JP 52144039	A2	19771201	JP 1976-61615	19760526
	JP 53016792	A2	19780216	JP 1976-91490	19760730
	JP 53016793	A2	19780216	JP 1976-91491	19760730
PRAI	JP 1976-61614		19760526		

JP 1976-61615 19760526
 JP 1976-91490 19760730
 JP 1976-91491 19760730

- AB A hydroxystyrene or a deriv. was copolymd. with dicyclopentadiene (I), cyclopentadiene, or dimethyldicyclopentadiene and, in some cases, an adduct of cyclopentadiene or methylcyclopentadiene with isoprene or piperylene to prep. resins which had softening temp. 50-200.degree., mol. wt. 300-1500, Br index 30-120, good soly. in hydrocarbon solvents, good stability in air, no gel content, and good compatibility with thermoplastics and rubbers. Thus, 45 g I and 5 g m-isopropenylphenol in 20 g xylene were copolymd. at 260.degree. for 4 h to prep. a copolymer [66837-87-4] which had softening temp. 130.degree., mol. wt. 590, Gardner color 11, and good soly. in toluene.
- ST cyclopentadiene hydroxystyrene copolymer; dicyclopentadiene hydroxystyrene copolymer; diene hydroxystyrene copolymer; blend cyclopentadiene hydroxystyrene copolymer; rubber blend hydroxystyrene copolymer; phenol alkenyl cyclopentadiene copolymer
- IT Rubber, butadiene, uses and miscellaneous
 Rubber, butadiene-styrene, uses and miscellaneous
 Rubber, natural, uses and miscellaneous
 RL: USES (Uses)
 (blends with cyclopentadiene deriv.-hydroxystyrene copolymers)
- IT Plastics
 RL: USES (Uses)
 (blends, contg. cyclopentadiene deriv.-hydroxystyrene copolymers)
- IT Polymerization
 (thermal, of cyclopentadiene and derivs. with hydroxystyrenes)
- IT 9010-86-0 24937-78-8
 RL: USES (Uses)
 (blends with cyclopentadiene deriv.-hydroxystyrene copolymers)
- IT 77-73-6DP, polymers with alkadiene-cyclopentadiene adducts and hydroxystyrene 78-79-5DP, reaction products with cyclopentadiene, polymers with cyclopentadienes and hydroxystyrenes 504-60-9DP, reaction products with cyclopentadiene, polymers with cyclopentadienes and hydroxystyrenes 542-92-7DP, reaction products with alkadienes, polymers with cyclopentadienes and hydroxystyrene 620-18-8DP, polymers with cyclopentadienes and alkadiene-cyclopentadiene adducts 26472-00-4DP, polymers with alkadiene-cyclopentadiene adducts and hydroxystyrene 26519-91-5DP, reaction products with isoprene, polymers with dimethyldicyclopentadiene and hydroxystyrene 51985-06-9DP, polymers with cyclopentadienes and alkadiene-cyclopentadiene adducts 66837-87-4P 67487-66-5P 67487-67-6P 67487-68-7P 67529-61-7P
 RL: **PREP (Preparation)**
 (manuf. of, with **compatibility** with rubbers and thermoplastics)
- IT 620-18-8DP, polymers with cyclopentadienes and alkadiene-cyclopentadiene adducts
 RL: **PREP (Preparation)**
 (manuf. of, with **compatibility** with rubbers and thermoplastics)
- RN 620-18-8 HCAPLUS
 CN Phenol, 3-ethenyl- (9CI) (CA INDEX NAME)

